

DOCUMENT RESUME

ED 062 577

08

VT 015 445

TITLE Industrial Arts Education--Instructional Materials.

INSTITUTION Ohio State Univ., Columbus. Center for Vocational and Technical Education.

SPONS AGENCY National Center for Educational Research and Development (DHEW/OE), Washington, D.C.

REPORT NO Bib-Ser-13

BUREAU NO BR-7-0158

PUB DATE 72

GRANT OEG-3-7-000158-2037

NOTE 108p.; Compilation of Abstracts from Abstracts of Instructional Materials in Vocational and Technical Education, 1967-1971

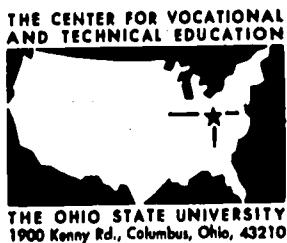
AVAILABLE FROM Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

EDRS PRICE MF-\$0.65 HC-\$6.58

DESCRIPTORS *Abstracts; Adult Education; Career Education; *Indexes (Locaters); *Industrial Arts; *Instructional Materials; Post Secondary Education; *Resource Guides; Secondary Grades

ABSTRACT

This compilation presents over 200 resumes of instructional materials in industrial arts which have appeared quarterly in "Abstracts of Instructional Materials in Vocational and Technical Education" (AIM), Fall 1967 through Fall 1971. Resumes cover a broad range of fields and occupations, such as cabinetmaking, construction, drafting, electronics, graphic arts, power mechanics, and woodworking. The resumes are arranged in ascending order according to an accession number and include the following information: (1) author(s), (2) title, (3) institutional source, (4) sponsoring agency, (5) grant, contract, and program area numbers, (6) report and bureau numbers, (7) available sources, (8) descriptors and identifiers which characterize the contents of the document, and (9) an abstract of the document. Author, subject, and conversion of document number indexes are included to help locate the abstracts by page number and accession number. The full texts of documents are available from the original sources or from ERIC Document Reproduction Service (EDRS) as microfiche or xerox reproductions. A sample resume and ordering information for AIM and EDRS reproduction are provided in an introductory section. (SB)



INDUSTRIAL ARTS EDUCATION

AIM

1967-1971

MISSION OF THE CENTER

The Center for Vocational and Technical Education, an independent unit on The Ohio State University campus, operates under a grant from the National Center for Educational Research and Development, U.S. Office of Education. It serves a catalytic role in establishing consortia to focus on relevant problems in vocational and technical education. The Center is comprehensive in its commitment and responsibility, multidisciplinary in its approach and interinstitutional in its program.

The Center's mission is to strengthen the capacity of state educational systems to provide effective occupational education programs consistent with individual needs and manpower requirements by:

- Conducting research and development to fill voids in existing knowledge and to develop methods for applying knowledge.
- Programmatic focus on state leadership development, vocational teacher education, curriculum, vocational choice and adjustment.
- Stimulating and strengthening the capacity of other agencies and institutions to create durable solutions to significant problems.
- Providing a national information storage, retrieval and dissemination system for vocational and technical education through the affiliated ERIC Clearinghouse.

INDUSTRIAL ARTS EDUCATION

INSTRUCTIONAL MATERIALS

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRO-
DUCED EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIG-
INATING IT. POINTS OF VIEW OR OPIN-
IONS STATED DO NOT NECESSARILY
REPRESENT OFFICIAL OFFICE OF EDU-
CATION POSITION OR POLICY.

a compilation of abstracts from
ABSTRACTS OF INSTRUCTIONAL MATERIALS
IN VOCATIONAL AND TECHNICAL EDUCATION
1967 - 1971

The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, Ohio 43210

1972

A FINAL REPORT
ON A PROJECT CONDUCTED UNDER
Project No. 7-0158
GRANT NO. OEG-3-7-000158-2037

The material in this publication was prepared pursuant to a grant with the Office of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION AND WELFARE

Office of Education
National Center for
Educational Research
and Development

PREFACE

Finding and using relevant information frequently is a major task for curriculum specialists, teachers, administrators and students. The Center for Vocational and Technical Education is dedicated to make useful and vital information accessible so that educators may use it to improve school practices.

The Center has assembled, under one cover, instructional materials specific to the field of industrial arts education. These items, in the form of abstracts, are selections from Abstracts of Instructional Materials in Vocational and Technical Education (AIM). Since 1967, The Center has presented AIM quarterly, in the form of collections of abstracts of documents from all areas of vocational and technical education.

Other publications in the series, of which this is a part, include compilations of abstracts of instructional materials for agricultural education, business and office education, distributive education, health occupations education, home economics education, and trade and industrial education. Compilations of instructional materials on any topic from the AIM document collection now are feasible and plans are being developed for possible future publication on such topics as occupational clusters, educational levels, and special problem areas.

Members of the profession are encouraged to forward instructional materials for possible inclusion in future issues of AIM to the Acquisitions Specialist at The Center. We are indebted to our colleagues in industrial arts education for providing us instructional materials for past issues of AIM. We also appreciate the contributions of instructional materials laboratories, local school systems and professional associations such as the Vocational Instructional Materials (VIM) section of the American Vocational Association.

We hope that this publication will prove valuable to you in your particular educational endeavors.

Robert E. Taylor
Director
The Center for Vocational and
Technical Education

TABLE OF CONTENTS

	Page
PREFACE	iii
INTRODUCTION	v
SAMPLE RESUME	vi
SUBSCRIPTIONS TO AIM	vii
ORDERING THE FULL TEXT OF CITED DOCUMENTS	vii
ABSTRACTS	1
INDEXES	57
SUBJECT INDEX	58
AUTHOR INDEX	83
CONVERSION OF DOCUMENT NUMBER INDEX	96

INTRODUCTION

Instructional materials for industrial arts education that have appeared quarterly in Abstracts of Instructional Materials in Vocational and Technical Education (AIM) between the Fall 1967 and Fall 1971 issues are presented in this single volume for your convenience.

This compilation of abstracts of over 200 documents in your field includes such specific areas as: cabinetmaking, construction (process), drafting, electronics, graphic arts, manufacturing, metals, power mechanics, and woodworking.

The indexes help you to locate the abstracts by page numbers and VT numbers. Index terms used in the subject index are ERIC descriptors. Each document has been assigned several of these descriptors; therefore, each document title appears in the subject index several times.

An abstract presents information about a document's content to help you to decide if you want to read the full text of the document. The abstract is part of the resume which provides information about the document, its source and availability. Abstracts are arranged in ascending VT-number order. A sample resume, following this Introduction, is explained in detail.

The full texts of documents are available from the original sources or from the ERIC Document Reproduction Service (EDRS) as microfiche or xerox reproductions. Ordering information for AIM and EDRS reproductions is provided in a following section.

SAMPLE RESUME

Accession Number -- identification number sequentially assigned to reports as they are processed.

Author(s) VT 013 122 ED 052 327 Richards, F.L.

Report Number and Bureau Number would appear here.

Publication date and total number of printed pages.

Identifier, if any -- acronyms, geographical areas, organizations, tests (e.g. Binet), etc. Only major identifiers preceded by an asterisk are in the index.

Abstract -- a condensation of the report. When applicable, it includes the purpose, means of development, teacher competency, student requirements, and description of supplementary materials if available.

DESCRIPTORS - *AGRICULTURAL EDUCATION; *CURRICULUM GUIDES; *ORNAMENTAL HORTICULTURE; HIGH SCHOOLS; *POST SECONDARY EDUCATION; LANDSCAPING; NURSERIES (HORTICULTURE); TURF MANAGEMENT; *TECHNICAL EDUCATION

ABSTRACT - Intended to suggest subject matter content of courses or programs in ornamental horticulture for high school and postsecondary vocational-technical programs, this curriculum guide was prepared by staff members of the Agricultural Education Department at the Pennsylvania State University, and tested in a workshop with vocational agriculture teachers. Contents are: (1) Outlines of Courses in Ornamental Horticulture, (2) Ornamental Horticulture Programs for Grades 10, 11, and 12, (3) Nursery Production . . . The content is presented in outline form under each topic, and is applicable to the United States and lower Canada. (GB)

If ED is followed by numbers, item has been announced in Research in Education. If ED is not followed by numbers, the issue of RIE in which the abstract is scheduled to appear follows the ED prefix.

Title.

Institutional source--the organization responsible for the report.

Sponsoring agency--appears here when different from Institutional source.

Grant Number, Contract Number, and Program Area Number would appear here.

Available source(s) if known at time of printing. Cost is included.

Descriptors--subject terms assigned to characterize substantive contents. Only the major terms, those preceded by an asterisk, are printed in the index.

Abstractor's initials.

Outlines of Courses in Ornamental Horticulture.

Pennsylvania State Univ., University Park.

Dept. of Agricultural Education.

Office of Education (DHEW), Washington, D.C.

Div. of Adult, and Vocational Research.

Teacher-Educ-Ser-v12-n1

Department of Agricultural Education, Pennsylvania State University, University Park, Pennsylvania 16802 (\$1.00).

Pub Date - 71 56p.

SUBSCRIPTIONS TO AIM

Abstracts of Instructional Materials in Vocational and Technical Education (AIM), upon which this publication is based, may be ordered by subscription at \$11.00 for one year, \$18.00 for two years, or \$27.00 for three years. Back orders are available beginning with the Fall 1968 issue. These back issues provide indexes to, and abstracts of, instructional materials for all of the occupational service areas.

Volume 5, Number 1 (1972) will announce instructional materials not covered by previous issues or in this publication.

Subscription orders, accompanied by check or purchase order, may be placed with:

AIM
The Center for Vocational and Technical Education
1900 Kenny Road
Columbus, Ohio 43210

ORDERING THE FULL TEXT OF CITED DOCUMENTS

All documents cited in this publication are available in their full text. Availability is by one of the options listed below:

1. Some documents are available in their original form from the supplier as shown in the abstract. This is usually the only source for documents not available on microfiche.
2. Most ED-numbered documents are available on microfiche at 65 cents per title from--

ERIC Document Reproduction Service (EDRS)
P.O. Drawer 0
Bethesda, Maryland 20014

Paper copy (xerox) is available from EDRS at \$3.29 per 100 pages or fraction thereof. Orders must specify ED number. A sample order form is enclosed.

3. Documents with VT numbers only are not available as individual microfiche, but most are part of VT-ERIC microfiche sets.
 - a. VT-ERIC microfiche sets each have an ED number.
 - b. Most VT-numbered documents (without an ED number) are contained within the VT-ERIC microfiche set for the issue of AIM in which they were announced.
 - c. The Document Number Index in this publication identifies the ED number of the VT-ERIC microfiche set for each VT number.
4. VT-ERIC microfiche sets are available--
 - a. In any complete collection of ERIC microfiche.
 - b. As VT-ERIC microfiche sets purchased individually.
 - c. From institutions (e.g., state research coordination units) which have the VT-ERIC microfiche sets and are willing to provide microfiche duplicates of individual VT-numbered documents.

Prices Of VT-ERIC Microfiche Sets

<u>ED Number</u>	<u>Price</u>	<u>ED Number</u>	<u>Price</u>
ED 013 339	\$17.38	ED 037 585	\$51.26
ED 015 349	36.08	ED 041 177	42.02
ED 017 746	48.84	ED 042 931	46.20
ED 020 442	47.08	ED 045 856	41.80
ED 022 971	34.10	ED 049 382	34.54
ED 028 305	36.74	ED 052 382	52.80
ED 030 770	49.94	ED 053 339	48.18
ED 032 434	75.46	ED (See February '72 RIE	
ED 034 074	62.04	for number)	67.98

(Prices effective June 1971)

LEASCO INFORMATION PRODUCTS, INC.

P.O. Drawer O, Bethesda, Md 20014

ERIC REPORTS ORDER BLANK

BILL TO: _____

SHIP TO: _____

PURCHASE ORDER NO. _____

MATERIAL REQUESTED					HOW TO ORDER	
ITEM	Document	Number of Copies		DOCUMENT PRICE (see reverse)	TOTAL PRICE	
	ED Number	MF	HC			
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
<input type="checkbox"/> TAX NUMBER _____				SUB-TOTAL		
<input type="checkbox"/> DEPOSIT ACCT. NUMBER _____				TAX		
<input type="checkbox"/> CHARGE (OVER \$10.00) _____						
<input type="checkbox"/> CHECK NUMBER _____				TOTAL		

To order ERIC REPORTS include complete information for all order form items. Please print or type all information clearly.

- Complete "bill to" and "ship to" addresses. Be sure to complete "ship to" address if different from "bill to". A like "ship to" address may be completed as "SAME". Include zip code.
- Order document by printing ED number in designated space. ED accession numbers are listed in Research in Education (RIE). RIE may be purchased from: Superintendent of Documents, GPO, Washington, D.C. 20402.
- Include number of copies (1, 2, 3, etc.) to be ordered in appropriate space. Use MF space for microfiche copies, use HC space for hard copy (paper). Check RIE for availability of document in MF and HC.
- Include document price from the rate schedule. (Refer to price schedule on back.) Prices published in RIE through April 1, 1971 are incorrect. Consult May 1971 and later issues for correct pricing.
- Some ED numbers include a series of titles and will be billed by title not ED number. A list of applicable ED numbers is available.
- Extend number of copies and document price for total price for each title.
- Add items 1 through 15 and insert amount in "Sub-Total" box.
- Add state sales tax for Illinois and Maryland or check box and cite tax exemption number for Illinois and Maryland only.
- Add "Sub-Total" and "Tax" and insert amount in "Total" box.
- Indicate payment method desired. Payment must accompany all orders of \$10.00 or less.
- SIGN AUTHORIZATION and date order.
- Include only 15 titles per form. Complete and sign additional forms if required.
- Quality warranty. LIPCO will replace products returned because of reproduction defects or incompleteness. The quality of the input document is not the responsibility of LIPCO. Best available copy will be supplied.

Orders are filled only from ED accession numbers. Titles are not checked. Please be sure you have supplied the correct numbers.

AUTHORIZATION _____ DATE _____

TITLE OR DEPT. _____

MAKE ALL CHECKS PAYABLE TO
LEASCO INFORMATION PRODUCTS, INC.

ABSTRACTS

VT 000 017 ED 026 449
PADHAM, ELWOOD
INDUSTRIAL ARTS AND TECHNOLOGY IN MAINE, A
STUDY OF AMERICAN INDUSTRY. A GUIDE FOR
SECONDARY SCHOOLS IN MAINE.

MAINE STATE DEPT. OF EDUCATION, AUGUSTA.
BUREAU OF VOCATIONAL EDUCATION
PUB DATE - 65 361P.

DESCRIPTORS - *STATE CURRICULUM GUIDES;
*INDUSTRIAL ARTS; CURRICULUM PLANNING;
*SECONDARY GRADES; EDUCATIONAL
EQUIPMENT; EDUCATIONAL OBJECTIVES;
BIBLIOGRAPHIES
IDENTIFIERS - *MAINE

ABSTRACT - THIS STATE CURRICULUM GUIDE IS FOR
USE BY INDUSTRIAL ARTS PERSONNEL IN GRADES
SEVEN THROUGH 12. IT WAS DEVELOPED BY 15 AREA
GROUPS AND TWO SUMMER WORKSHOPS IN A SERIES
OF STEPS INCLUDING PROPOSED OUTLINES,
DISCUSSION MEETINGS, CONTENT AND METHOD
LISTINGS FOR EACH GRADE, AND TEACHING UNIT
DEVELOPMENT. THE CONTENTS ARE ORGANIZED BY
GRADES UNDER THESE HEADINGS: (1)
MANUFACTURING INDUSTRIES GRADES 7, 8, AND 9,
(2) MANUFACTURING AND CONSTRUCTION INDUSTRIES
GRADE 10, (3) POWER AND TRANSPORTATION
INDUSTRIES GRADE 12. EACH SECTION GIVES
GENERAL AND SPECIFIC OBJECTIVES, SUGGESTED
ACTIVITIES, TEACHER'S APPROACH, AND RESOURCE
MATERIALS. TIME ALLOTMENT VARIES FROM 2 HOURS
PER WEEK IN GRADE 7 TO 7 HOURS PER WEEK IN
GRADES 11 AND 12. THE CONTENT IS DESIGNED TO
EXPOSE THE AVERAGE PUPIL TO A WIDE VARIETY OF
MATERIALS, TOOLS, PROCESSES, PRODUCTS, AND
OCCUPATIONS OF MODERN INDUSTRY. SUPPLEMENTARY
MATERIALS INCLUDE A SUGGESTED TOOL AND
EQUIPMENT LIST FOR TYPICAL JUNIOR AND SENIOR
HIGH SCHOOL GENERAL SHOPS. (EM)

VT 000 239
INDUSTRIAL ARTS SUPPLEMENT. CAREER GUIDANCE
SERIES. CURRICULUM BULLETIN, 1967-68 SERIES,
NO. 30.

NEW YORK CITY BOARD OF EDUCATION, N.Y.
BOARD OF EDUCATION OF THE CITY OF NEW YORK,
PUBLICATIONS SALES OFFICE, 110 LIVINGSTON
STREET, BROOKLYN, NEW YORK 11201 (\$4.00).
PUB DATE - 67 197P.

DESCRIPTORS - *INDUSTRIAL ARTS; *RESOURCE
GUIDES; *RESOURCE MATERIALS; CONSTRUCTION
INDUSTRY; POWER MECHANICS; *LESSON PLANS;
*TEACHING PROCEDURES; PRINTING; MAINTENANCE;
WORKSHEETS; JUNIOR HIGH SCHOOL STUDENTS
IDENTIFIERS - *CAREER GUIDANCE SERIES

ABSTRACT - THIS RESOURCE GUIDE OFFERS
INDUSTRIAL ARTS TEACHERS PROJECT IDEAS AND
GUIDES FOR DEVELOPING SHOP ACTIVITIES IN THE
FOLLOWING MAJOR INDUSTRIAL AREAS: GENERAL
CONSTRUCTION AND REPAIR, BUILDING
CONSTRUCTION AND MAINTENANCE, POWER
MECHANICS, AND IN-PLANT PRINTING. THE
PROJECTS IN EACH AREA INCLUDE MATERIALS AND
EQUIPMENT LISTS, VISUAL AIDS, PROCEDURES,
OUTCOMES, REFERENCES, AND ASSIGNMENTS. THE
GUIDE ALSO CONTAINS PLANS AND SUGGESTIONS FOR
ORGANIZING A MULTI-AREA SHOP TO PROVIDE THE
PUPILS WITH A DIVERSIFIED PROGRAM OF SHOP
EXPERIENCES. TWENTY-NINE OPERATION SHEETS ARE

APPENDED. THIS GUIDE IS TO BE USED IN
CONJUNCTION WITH "INDUSTRIAL ARTS" AVAILABLE
AS VT 001 359 (ALSO IN THIS ISSUE). (GR)

VT 000 306
INFORMATION ON HAND TOOLS FOR METALWORKING
TRADES.

TEXAS UNIV., AUSTIN. DEPT. OF INDUSTRIAL
EDUCATION
TEXAS EDUCATION AGENCY, AUSTIN. INDUSTRIAL
EDUCATION DIV.
INDUSTRIAL EDUCATION DEPARTMENT, DIVISION OF
EXTENSION, THE UNIVERSITY OF TEXAS, AUSTIN,
TEXAS 78712 (\$2.50).
PUB DATE - NOV57 127P.

DESCRIPTORS - *TEXTBOOKS; *TRADE AND
INDUSTRIAL EDUCATION; *METAL WORKERS; *HAND
TOOLS; HIGH SCHOOLS

ABSTRACT - THIS TEXTBOOK IS FOR STUDENT USE
IN A BEGINNING GENERAL METAL SHOP COURSE AT
THE HIGH SCHOOL LEVEL. IT WAS DEVELOPED BY AN
INSTRUCTOR AND AN ADVISORY COMMITTEE. IT
COVERS (1) HAND HACKSAWS, (2) FILES, (3)
HAMMERS, (4) CHISELS AND PUNCHES, (5) VISES
AND CLAMPS, (6) MEASURING TOOLS, (7) LAYOUT
TOOLS, (8) WRENCHES, (9) PLIERS, (10)
SCREWDRIVERS, (11) DRILLS, (12) HAND
THREADING TOOLS, (13) REAMERS, (14) SOLDERING
COPPERS AND BLOWTORCHES, AND (15) GAUGES. IT
IS ILLUSTRATED WITH LINE DRAWINGS AND
PHOTOGRAPHS OF THE TOOLS AND THEIR PROPER
USE. TESTS COVERING THIS MATERIAL ARE
AVAILABLE IN "TESTS ON HAND TOOLS FOR
METALWORKING TRADES" (VT 000 307) FOR 90
CENTS. (EM)

VT 000 333
KLEHM, WALTER A., ED., AND OTHERS
GUIDELINES FOR INDUSTRIAL ARTS INSTRUCTION.
GRADES VII-XII. SUBJECT FIELD SERIES BULLETIN
O-SIX.

ILLINOIS STATE DEPT. OF PUBLIC INSTRUCTION,
SPRINGFIELD
OFFICE OF THE SUPERINTENDENT OF PUBLIC
INSTRUCTION, 316 SOUTH SECOND STREET,
SPRINGFIELD, ILLINOIS 62706 (NO CHARGE).
PUB DATE - 64 270P.

DESCRIPTORS - *CURRICULUM GUIDES; *TEACHING
GUIDES; *INDUSTRIAL ARTS; SECONDARY GRADES;
CURRICULUM PLANNING

ABSTRACT - THIS CURRICULUM GUIDE WAS
DEVELOPED BY A COMMITTEE OF INDUSTRIAL ARTS
TEACHERS, SUPERVISORS, AND TEACHER EDUCATORS
FOR USE BY TEACHERS. CHAPTERS ARE: (1) THE
PROBLEM AND PROCEDURE, PROVIDING A GLOSSARY
OF PERTINENT TERMS, (2) POINT OF VIEW, GIVING
EDUCATIONAL OBJECTIVES AND THE FUNCTION AND
PLACE OF INDUSTRIAL ARTS, (3) THE INDUSTRIAL
ARTS PROGRAM, DESCRIBING THE CONTRIBUTIONS,
STUDENT EXPERIENCES, DEVELOPMENTAL BEHAVIORAL
OBJECTIVES, HORIZONTAL AND VERTICAL
ORGANIZATIONS, AND TYPICAL COURSE
ORGANIZATIONS, (4) THE SELECTION OF LEARNING
EXPERIENCES, PRESENTING SUGGESTED CONTENT FOR
13 JUNIOR HIGH SCHOOL COURSES AND SEVEN
SENIOR HIGH SCHOOL COURSES, (5) THE
ORGANIZATION OF LEARNING EXPERIENCES,

IND ARTS

DISCUSSING COURSE PLANNING, TEACHING METHODS, AND INSTRUCTIONAL AIDS, (6) THE MANAGEMENT OF INSTRUCTION, EXPLAINING LABORATORY AND STUDENT ORGANIZATION AND MANAGEMENT, AND (7) EVALUATING INSTRUCTION IN INDUSTRIAL ARTS, GIVING THE CHARACTERISTICS AND OBJECTIVES OF EVALUATION. MOST CHAPTERS INCLUDE A LIST OF REFERENCES. THE DOCUMENT WAS PLANNED TO BE SUGGESTIVE RATHER THAN PERSCRPTIVE AND TO SERVE AS A SOURCE OF PRACTICAL HELP REFLECTING RESEARCH FINDINGS. IT COVERS BOTH JUNIOR AND SENIOR HIGH SCHOOL INDUSTRIAL ARTS. ILLUSTRATIONS ARE LINE DRAWINGS AND PHOTOGRAPHS. (EM)

VT 000 398

CREIGHTON, WILLIAM H., JR., AND OTHERS
INDUSTRIAL ARTS CURRICULUM GUIDE FOR
ELECTRICITY IN OHIO SCHOOLS.

OHIO INDUSTRIAL ARTS ASSOCIATION, COLUMBUS
OHIO STATE DEPT. OF EDUCATION, COLUMBUS
PUB DATE - MAR65 32P.

DESCRIPTORS - *CURRICULUM GUIDES;
*ELECTRICITY; *ELECTRONICS; SECONDARY GRADES;
*INDUSTRIAL ARTS

ABSTRACT - A COMMITTEE OF TEACHERS WHO HAD TAUGHT ELECTRICITY AND ELECTRONICS AT COLLEGE AND SECONDARY LEVELS PREPARED THIS GUIDE FOR BASIC COURSES AT THE JUNIOR OR SENIOR HIGH SCHOOL LEVELS. DISCUSSION TOPICS, TEACHING AIDS, DEMONSTRATIONS OR EXPERIMENTS, PROJECT ACTIVITIES, AND TEACHING AIDS ARE GIVEN FOR UNITS ON: (1) HISTORY AND OCCUPATIONS, (2) SIMPLE CIRCUITS AND HOUSEWIRING, (3) SMALL HEATING APPLIANCES, (4) MAGNETISM, (5) TRANSFORMERS, (6) FRACTIONAL HORSEPOWER MOTORS, (7) BATTERIES AND ELECTROCHEMISTRY, (8) AUTOMOTIVE ELECTRICITY, (9) TESTING EQUIPMENT AND METERS, AND (10) ELECTRONICS. REFERENCES, A TABLE OF READING ASSIGNMENTS, SOURCES FOR VISUAL AIDS, EQUIPMENT, SUPPLIES, AND A SUGGESTED EQUIPMENT INVENTORY ARE INCLUDED. (EM)

VT 000 467

GRAPHIC ARTS.

SAINT PAUL PUBLIC SCHOOLS, MINN. CURRICULUM
OFFICE
PUBLICATION NO. 296
PUB DATE - 64 206P.

DESCRIPTORS - *CURRICULUM GUIDES; SECONDARY
GRADES; JUNIOR HIGH SCHOOLS; GLOSSARIES;
*GRAPHIC ARTS; *INDUSTRIAL ARTS

ABSTRACT - THIS GUIDE WAS DEVELOPED ESPECIALLY FOR USE IN JUNIOR HIGH SCHOOL GRAPHIC ARTS PROGRAMS. IT CONTAINS OBJECTIVES, FUNDAMENTAL OPERATIONS, RELATED INFORMATION, EQUIPMENT, STUDY OR EXAMINATION QUESTIONS, AND REFERENCES FOR THESE UNITS: (1) TYPE AND PRESSWORK, (2) PAPER AND ELEMENTARY BINDING, (3) STENCILS, (4) LINOLEUM BLOCK, (5) SILK SCREEN, AND (6) INTAGLIO. A SEVEN PAGE GLOSSARY IS GIVEN. (EM)

VT 000 506

EASTER, D. DALE, AND OTHERS
INDUSTRIAL ARTS COURSE OUTLINES, GRADES
SEVEN, EIGHT, AND NINE.

CALIFORNIA STATE DEPT. OF EDUCATION,
SACRAMENTO
PUB DATE - 65 53P.

DESCRIPTORS - *STATE CURRICULUM GUIDES;
*JUNIOR HIGH SCHOOLS; *INDUSTRIAL ARTS

ABSTRACT - GUIDELINES ARE GIVEN FOR ASSISTANCE IN THE PREPARATION OF DETAILED COURSES OF INSTRUCTION AND IN SECURING IMPROVEMENT OF INSTRUCTION IN GRADES 7 OR 8 OF ELEMENTARY SCHOOLS, GRADES 7, 8, AND 9 OF JUNIOR HIGH SCHOOLS, AND GRADE 9 OF 4-YEAR HIGH SCHOOLS. SUGGESTIONS ARE INCLUDED FOR COURSES ON TWO LEVELS IN EACH OF THESE SUBJECTS: (1) DRAFTING, (2) ELECTRONICS, (3) GRAPHIC ARTS, (4) INDUSTRIAL CRAFTS, (5) METALS, (6) POWER MECHANICS, AND (7) WOODS. EACH SECTION IS COMPOSED OF TOPICS FOR STUDY, DISCUSSION, DEMONSTRATION, AND ACTIVITIES FOR EXTENSION OF KNOWLEDGE AND SKILLS. (EM)

VT 000 508

CLACK, EDWARD, AND OTHERS
INDUSTRIAL ARTS PROGRAMING FOR THE HIGH
SCHOOL. (BULLETIN, NO. 2148).

MICHIGAN STATE DEPT. OF PUBLIC INSTRUCTION,
LANSING
PUB DATE - 65 18P.

DESCRIPTORS - *INDUSTRIAL ARTS; *CURRICULUM
PLANNING; LEARNING LABORATORIES; *SENIOR HIGH
SCHOOLS

ABSTRACT - OBJECTIVES FOR SENIOR HIGH SCHOOL CLASSES IN INDUSTRIAL ARTS RELATE TO CITIZENSHIP, CRAFTSMANSHIP, CULTURAL APPRECIATION, CONSUMER KNOWLEDGE, WORTHY HOME MEMBERSHIP, GUIDANCE AND EXPLORATION, OCCUPATIONAL KNOWLEDGE, AND AVOCATIONAL EXPERIENCES ARE DISCUSSED. BROAD AREAS AND ACTIVITIES ARE (1) WOODWORKING AND LAMINATES, ELECTRICITY, METAL FORMING, METAL-WORKING, DRAFTING, GRAPHIC ARTS, AND POWER MECHANICS FOR GRADE 10, (2) WOODWORKING, ELECTRICITY, METALWORKING, DRAFTING, WELDING, POWER MECHANICS, AUTO MECHANICS, FOUNDRY, AND GRAPHIC ARTS FOR GRADE 11, AND (3) WOODWORKING, ELECTRICITY, ELECTRICITY, ELECTRONICS, METALWORKING, DRAFTING, WELDING, AUTO MECHANICS, AND NEW MATERIALS AND PROCESSES FOR GRADE 12. GUIDELINES FOR SHOP PLANNING AND SHOP ORGANIZATION ARE INCLUDED ALONG WITH A BIBLIOGRAPHY. (EM)

VT 000 531

POWER . BULLETIN NO. 2149.

MICHIGAN STATE DEPT. OF PUBLIC INSTRUCTION,
LANSING
STATE DEPARTMENT OF EDUCATION, P.O. BOX 928,
LANSING, MICHIGAN 48904 (SINGLE COPIES
WITHOUT CHARGE).
PUB DATE - 65 39P.

DESCRIPTORS - *TEACHING GUIDES; *INDUSTRIAL
ARTS; *ENGINES; JUNIOR HIGH SCHOOLS

ABSTRACT - THIS CURRICULUM GUIDE WAS DEVELOPED BY THE STATE INDUSTRIAL ARTS CURRICULUM COMMITTEE OF INDUSTRIAL ARTS TEACHERS AND PROFESSORS FOR USE BY TEACHERS IN PLANNING A ONE-SEMESTER COURSE ON POWER OR ENERGY CONVERSION AT THE JUNIOR HIGH SCHOOL LEVEL. GENERAL COURSE OBJECTIVES ARE TO (1) FAMILIARIZE THE STUDENT WITH POWER IN PRODUCING USEFUL WORK, (2) PROMOTE AN INTEREST IN THE MECHANICS OF POWER EQUIPMENT, (3) PROVIDE KNOWLEDGE OF OPERATING PRINCIPLES OF POWER PRODUCING ENGINES AND THEIR INDUSTRIAL APPLICATION, AND (4) DEVELOP CONSUMER KNOWLEDGE, AN APPRECIATION OF INDUSTRY AND ITS PRODUCTS, GOOD WORK HABITS, AND AN APPRECIATION FOR THE SAFE AND EFFECTIVE USE OF POWER. MAJOR UNITS ARE (1) INTRODUCTION AND HISTORY OF POWER, (2) MEASUREMENTS OF POWER, (3) WATER POWER, (4) WIND POWER, (5) PNEUMATICS, (6) HYDRAULICS, (7) ELECTRICITY-ELECTRONICS, (8) STEAM, (9) INTERNAL COMBUSTION, (10) SOLAR ENERGY, (11) ATOMIC POWER, AND (12) ROCKET. EACH UNIT GIVES OBJECTIVES, CLASS AND TEACHER ACTIVITIES, AND A BIBLIOGRAPHY OF REFERENCES AND TEACHING AIDS. (EM)

VT 000 549
INDUSTRIAL ARTS AND VOCATIONAL EDUCATION,
SAFETY MANUAL.

OHIO INDUSTRIAL COMMISSION, COLUMBUS. DIV. OF
SAFETY AND HYGIENE
OHIO STATE DEPT. OF EDUCATION, COLUMBUS
PUB DATE - AUG66 75P.

DESCRIPTORS - *SAFETY; *INDUSTRIAL ARTS;
*TRADE AND INDUSTRIAL EDUCATION; *RESOURCE
UNITS

ABSTRACT - INDUSTRIAL ARTS AND VOCATIONAL
EDUCATION TEACHERS MAY USE THIS LOOSE LEAF
NOTEBOOK AS RESOURCE MATERIAL ON SHOP SAFETY.
SAFETY SUGGESTIONS ARE LISTED FOR THE AREAS
OF (1) AUTOMOTIVE POWER AND MECHANICS, (2)
DRAFTING, (3) ELECTRICITY AND ELECTRONICS,
(4) GENERAL SAFETY, (5) GRAPHIC ARTS, (6)
INDUSTRIAL CRAFTS, (7) METALS, AND (8) WOOD
SHOP. ALSO INCLUDED ARE A STUDENT INJURY
REPORT FORM, SIX SAMPLE SAFETY POSTERS, AND A
COPY OF "MONITOR," THE COMMISSION'S MONTHLY
PUBLICATION. (EM)

VT 000 847
HOLT, E.E.
A GUIDE FOR INDUSTRIAL ARTS IN OHIO SCHOOLS,
SECOND EDITION .

OHIO INDUSTRIAL ARTS ASSOCIATION, COLUMBUS
OHIO STATE DEPT. OF EDUCATION, COLUMBUS
STATE DEPARTMENT OF EDUCATION, STATE OFFICE
BUILDING, COLUMBUS, OHIO 43215.
PUB DATE - APR63 42P.

DESCRIPTORS - *ADMINISTRATOR GUIDES;
*INDUSTRIAL ARTS; *ELEMENTARY GRADES; HIGH
SCHOOLS; *CURRICULUM; ADULT EDUCATION
IDENTIFIERS - OHIO

ABSTRACT - THE PURPOSE OF THIS GUIDE IS TO
REDEFINE INDUSTRIAL ARTS IN LIGHT OF THE
PRESENT DAY ENVIRONMENT TO OUTLINE A PROGRAM

WHICH IS BROADLY CONCEIVED TO TEACH INDUSTRY
AS A PART OF THE EDUCATION OF ALL YOUTH. THE
CONTENTS INCLUDE A HISTORY OF INDUSTRIAL ARTS
IN OHIO, SOME RECOGNIZED PURPOSES OF
EDUCATION, A STUDY OF INDUSTRY IN THE SCHOOL
PROGRAM, A DEFINITION OF INDUSTRIAL ARTS, AND
THE UNIQUE CONTRIBUTIONS OF INDUSTRIAL ARTS.
THE PURPOSES AND SUBJECT AREAS ARE GIVEN FOR
ELEMENTARY SCHOOL, JUNIOR HIGH SCHOOL, AND
SENIOR HIGH SCHOOL. IMPLICATIONS FOR SPECIAL
EDUCATION AND ADULT EDUCATION ARE DISCUSSED.
FACTORS AFFECTING THE PROGRAM AND FACILITIES
SUCH AS SCHEDULING, GROUPING, CLASS SIZE,
TEACHER COMPETENCY, ARCHITECTURAL
CONSIDERATIONS, SERVICE REQUIREMENTS, AND
SPARE REQUIREMENTS ARE ALSO COVERED. (EM)

VT 000 887
THE PROGRAM OF INDUSTRIAL ARTS EDUCATION IN
KENTUCKY. EDUCATIONAL BULLETIN, V. 31, NO.
9 .

KENTUCKY STATE DEPT. OF EDUCATION, FRANKFORT
PUB DATE - AUG63 158P.

DESCRIPTORS - *PROGRAM GUIDES; *INDUSTRIAL
ARTS; *BIBLIOGRAPHIES; *TEXTBOOKS;
*CURRICULUM GUIDES; SCHOOL SHOPS;
HIGH SCHOOLS; CURRICULUM
IDENTIFIERS - KENTUCKY

ABSTRACT - AS A SUMMATION OF THE BELIEFS AND
CONCEPTS OF A NUMBER OF INDUSTRIAL AND
PRACTICAL ARTS EDUCATORS, THIS PUBLICATION IS
A USEFUL SOURCE OF PHILOSOPHY, CURRICULUM,
AND TEACHING PROCEDURES FOR INDUSTRIAL ARTS
EDUCATION. THE CONTENTS INCLUDE: (1) THE
SCHOOL ADMINISTRATOR AND THE INDUSTRIAL ARTS
PROGRAM, (2) THE MEANING AND FUNCTION OF
INDUSTRIAL ARTS, (3) THE INDUSTRIAL ARTS
TEACHER, (4) THE INDUSTRIAL ARTS CURRICULUM,
(5) PLANNING AND EQUIPPING INDUSTRIAL ARTS
LABORATORIES, (6) PROBLEM SOLVING,
CREATIVITY, AND DESIGN, (7) THE COMPREHENSIVE
GENERAL SHOP FOR GRADES SEVEN AND EIGHT, (8)
GENERAL DRAFTING, (9) GENERAL WOODWORKING,
(10) GENERAL METALS, (11) ELECTRICITY-
ELECTRONICS, (12) POWER MECHANICS, (13)
GRAPHIC ARTS, AND (14) GENERAL PLASTICS. THE
APPENDIX CONTAINS CHAPTER BIBLIOGRAPHIES,
EQUIPMENT LISTS, INSTRUCTIONAL AIDS FOR THE
SUBJECT AREAS, AND AUDIO-VISUAL AIDS. (EM)

VT 000 898
INDUSTRIAL ARTS CURRICULUM GUIDE FOR SEVENTH
AND EIGHTH GRADES, SUMMER, 1966.

JEFFERSON COUNTY PUBLIC SCHOOLS, LOUISVILLE,
KY. DEPT. OF CURRICULUM DEVELOPMENT AND
SUPERVISION
PUB DATE - 66 58P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; GRADE 7; GRADE 8; *JUNIOR HIGH SCHOOLS

ABSTRACT - THIS GUIDE WAS DEVELOPED TO ENABLE
TEACHERS WITHIN THE COUNTY TO DEVELOP A
UNIFORM PROGRAM THAT WILL GIVE STUDENTS
GROWTH EXPERIENCES IN INDUSTRIAL ARTS. THE
GUIDE INCLUDES GENERAL OBJECTIVES, SPECIFIC
INSTRUCTIONS FOR USING THE CONTENT OUTLINES,
AREAS OF INDUSTRIAL ARTS, CONTENT OUTLINES
FOR SEVENTH AND EIGHTH GRADES, FILM

IND ARTS

BIBLIOGRAPHY, SUGGESTIONS FOR OPENING AND CLOSING THE SCHOOL SHOP FOR THE YEAR, AND A BIBLIOGRAPHY OF TEXTS. SEVENTH GRADE SUBJECT AREAS ARE DRAWING AND PLANNING, WOODWORKING, METALWORKING, AND LEATHERWORKING. EIGHTH GRADE SUBJECT AREAS ARE DRAWING AND PLANNING, ELECTRICITY, METALWORKING, PLASTICS, AND WOODWORKING. (EM)

VT 000 969
PRINCIPLES AND PRACTICES OF TRADE AND INDUSTRIAL TEACHING (INCLUDING TECHNICAL AND INDUSTRIAL ARTS), A SYLLABUS FOR THE COURSE.

SOUTHEAST MISSOURI STATE COLL., CAPE GIRARDEAU. DEPT. OF INDUSTRIAL ARTS
PUB DATE - 66 20P.

DESCRIPTORS - *STUDY GUIDES; *TEACHER EDUCATION; *INDUSTRIAL ARTS; *TRADE AND INDUSTRIAL EDUCATION; *TEACHING METHODS; TECHNICAL EDUCATION

ABSTRACT - INFORMATION ON TEACHING METHODOLOGY, PRINCIPLES, AND EVALUATIVE CRITERIA IS PROVIDED FOR TRAINING INDUSTRIAL ARTS AND TRADE AND INDUSTRIAL TEACHERS. THE MATERIAL WAS DEVELOPED BY A COLLEGE FACULTY MEMBER. REFERENCES AND STUDY QUESTIONS ARE GIVEN FOR THE UNITS: (1) BACKGROUND FOR VOCATIONAL-TECHNICAL EDUCATION, (2) THE INSTRUCTOR, (3) INDUSTRIAL ARTS, (4) TECHNICAL EDUCATION, (5) CONCEPTS AND TRENDS, (6) SHOP FACTORS AFFECTING LEARNING, (7) COURSE AND LABORATORY PLANNING, (8) INSTRUCTIONAL AIDS, (9) MANAGEMENT PROCEDURES, (10) STUDENT EVALUATION, (11) PUBLIC RELATIONS, (12) VOCATIONAL GUIDANCE, (13) REIMBURSED PROGRAMS, AND (14) PRINCIPLES OF VOCATIONAL EDUCATION. THE SUGGESTED TIME ALLOTMENT IS 72 CLOCK HOURS. GENERAL COURSE REQUIREMENTS AND A BIBLIOGRAPHY OF OUTSIDE READINGS CONTAINING MATERIAL DATED FROM 1926 TO 1966 ARE INCLUDED. (EM)

VT 000 978
INDUSTRIAL ARTS ELECTRICITY--ELECTRONICS, GRADES 7-12 .

TEXAS INDUSTRIAL ARTS ASSOCIATION
TEXAS EDUCATION AGENCY, AUSTIN
PUB DATE - OCT65 60P.

DESCRIPTORS - *INDUSTRIAL ARTS; *ELECTRICITY; *ELECTRONICS; *CURRICULUM GUIDES; JUNIOR HIGH SCHOOLS; HIGH SCHOOLS

ABSTRACT - TO HELP INDUSTRIAL ARTS TEACHERS IN ORGANIZING AND TEACHING ELECTRICITY AND ELECTRONICS, THIS GUIDE IS PRESENTED FOR USE IN GRADES 7 THROUGH 12. THE COURSES COVERED ARE: (1) INTRODUCTORY ELECTRICITY, GRADES 7 AND 8 (9 WEEKS), (2) GENERAL ELECTRICITY, GRADES 9-12 (36 WEEKS), AND (3) BASIC ELECTRONICS, GRADES 10-12 (36 WEEKS). FOR EACH OF THESE FLEXIBLE COURSES ARE GIVEN DESCRIPTION OF SUITABILITY, ORGANIZATION OF THE UNITS, RECOMMENDATIONS CONCERNING CONTENT, SUGGESTED TOPIC OUTLINE, DISCUSSION OF SUGGESTED FACILITIES AND EQUIPMENT, SUGGESTED TEXT LIST, AND SUGGESTED STUDENT ACTIVITIES. SUGGESTED GUIDES FOR SHOP PLANNING AND THREE SAMPLE FLOOR PLANS ARE

ALSO GIVEN. (EM)

VT 000 979
WOODWORKING, GRADES 7-12; A TENTATIVE BULLETIN.

TEXAS INDUSTRIAL ARTS ASSOCIATION, DENTON
TEXAS EDUCATION AGENCY, AUSTIN
PUB DATE - JUN65 89P.

DESCRIPTORS - *INDUSTRIAL ARTS; *WOODWORKING; *CURRICULUM GUIDES; SECONDARY GRADES

ABSTRACT - TO IMPROVE INSTRUCTION, A TENTATIVE CURRICULUM GUIDE WAS PREPARED AND PRESENTED TO TEACHERS ON THE JUNIOR AND SENIOR HIGH LEVEL. THE FOLLOWING COURSES ARE COVERED: (1) INTRODUCTORY GENERAL SHOP (WOOD AREA) FOR GRADES 7 OR 8, (2) INTRODUCTORY WOODWORKING IN GRADES 7 OR 8, (3) GENERAL SHOP I (WOOD AREA) FOR GRADES 9, 10, 11, OR 12, (4) GENERAL SHOP II (WOOD AREA) FOR GRADES 9, 10, 11, OR 12, (5) GENERAL WOODWORKING FOR GRADES 9, 10, 11, OR 12, (6) MACHINE WOODWORKING I FOR GRADES 10, 11, 12, AND (7) MACHINE WOODWORKING II FOR GRADES 11 OR 12. EACH COURSE OUTLINE CONTAINS A GENERAL INTRODUCTION, SUGGESTION GRADE LEVEL, CLASS TIME ALLOTMENT, RECOMMENDED CLASS SIZE, COURSE CREDIT, PREREQUISITES, SUGGESTED ACTIVITIES, SUGGESTED HOMEWORK, DISCIPLINE PROCEDURES, COURSE OBJECTIVES, TOPICAL OUTLINE OF CONTENT, SUGGESTED TEACHING AIDS, SUGGESTED TEACHING METHODS, AND SUGGESTIONS FOR SHOP ORGANIZATION. HINTS ON SAFETY INSTRUCTION AND SAFETY RULES ARE GIVEN FOR VARIOUS AREAS OF THE WOOD SHOP. A SUGGESTED TOOL AND EQUIPMENT LIST IS GIVEN ALONG WITH A SUGGESTED FLOOR PLAN. (EM)

VT 000 980
DRAFTING, GRADES 7-12.

TEXAS INDUSTRIAL ARTS ASSOCIATION, DENTON
TEXAS EDUCATION AGENCY, AUSTIN
PUB DATE - JUN64 62P.

DESCRIPTORS - *INDUSTRIAL ARTS; *DRAFTING; *CURRICULUM GUIDES; SECONDARY GRADES

ABSTRACT - THE DEFINITION OF THE SCOPE AND DEPTH OF DRAFTING COURSES TAUGHT IN TEXAS PUBLIC SCHOOLS AND THE RECOMMENDATION OF NEEDED MATERIALS AND EQUIPMENT ARE THE PURPOSES OF THIS GUIDE. THESE COURSES ARE COVERED: (1) INTRODUCTORY DRAFTING FOR GRADES 7 OR 8, (2) GENERAL SHOP DRAFTING FOR GRADES 7, 8, 9, 10, 11, OR 12, (3) GENERAL DRAFTING FOR GRADES 9, 10, 11, OR 12, (4) ARCHITECTURAL DRAFTING I FOR GRADES 10, 11, OR 12, (5) ARCHITECTURAL DRAFTING II FOR GRADES 11 OR 12, (6) MACHINE DRAFTING I FOR GRADES 10, 11, OR 12, (7) MACHINE DRAFTING II FOR GRADES 11 OR 12, (8) PRE-ENGINEERING DRAFTING FOR GRADES 10, 11, OR 12, (9) PRE-ENGINEERING DESCRIPTIVE GEOMETRY FOR GRADES 11 OR 12, (10) TECHNICAL DRAFTING I FOR GRADES 10, 11, OR 12, AND (11) TECHNICAL DRAFTING II FOR GRADES 11 OR 12. EACH OF THE COURSE OUTLINES GIVES THE GRADE PLACEMENT OF THE COURSE, PREREQUISITES, CREDIT FOR COURSE, COURSE OBJECTIVES, COURSE TOPICS, AND DESIRED BEHAVIORAL CHANGES. SOME OF THE ADVANCED

COURSE OUTLINES ALSO INCLUDE HINTS ON STUDENT SELECTION, CONTENT SELECTION, SUGGESTED TEACHING METHODS, AND A DISCUSSION OF THE SCOPE AND DEPTH OF THE COURSE. ALSO GIVEN ARE SUGGESTIONS FOR PLANNING LABORATORIES AND EQUIPMENT AND FOR TWO FLOOR PLANS. (EM)

VT 001 200

INSTRUCTIONAL GUIDE FOR METALS. INDUSTRIAL ARTS EDUCATION BULLETIN NO. 8.

HAWAII STATE DEPT. OF EDUCATION, HONOLULU.
INDUSTRIAL ARTS EDUCATION SERVICE
PUB DATE - 65 202P.

DESCRIPTORS - *INDUSTRIAL ARTS; *STATE CURRICULUM GUIDES; *METALS; METAL INDUSTRY; METALLURGY; METAL WORKING OCCUPATIONS; BIBLIOGRAPHIES; SAFETY EDUCATION; SCHOOL SHOPS; SECONDARY GRADES

ABSTRACT - MAJOR PURPOSES OF THIS GUIDE ARE TO ASSIST TEACHERS IN THE IMPROVEMENT OF COURSE PLANNING AND TO PROVIDE FOR UNIFORMITY OF METAL PROGRAMS THROUGHOUT THE STATE. IT COVERS SIX SEMESTERS AND SUGGESTS DOUBLE PERIOD SCHEDULING FOR THE LAST FOUR SEMESTERS. CONTENTS INCLUDE CONTENT OBJECTIVES OF INDUSTRIAL ARTS PROGRAMS, BEHAVIORAL CHANGE OBJECTIVES, SUGGESTED SEQUENCE OF COURSES, COURSE OUTLINES FOR SIX METALS COURSES, TEACHING TECHNIQUES, SAMPLE ASSIGNMENT SHEETS, SAMPLE JOB SHEETS, SAMPLE INFORMATION SHEETS, SAMPLE STUDY GUIDES AND TESTS, SAFETY INSTRUCTIONS, A SECTION ON SHOP ORGANIZATION AND MANAGEMENT, A BIBLIOGRAPHY OF INSTRUCTIONAL AIDS, GUIDANCE PROCEDURES, REQUISITION AND REPORT FORMS, EQUIPMENT AND SUPPLY LISTS, AND BIBLIOGRAPHY OF TEXTBOOKS PUBLISHED FROM 1950 TO 1965. (EM)

VT 001 250

SALMON, DANIEL A.
INDUSTRIAL ARTS WOODWORKING, SECONDARY SCHOOLS. FIRST YEAR.

NEW YORK CITY BOARD OF EDUCATION, BROOKLYN, N.Y.
BOARD OF EDUCATION OF THE CITY OF NEW YORK, PUBLICATIONS SALES OFFICE, 110 LIVINGSTON STREET, BROOKLYN, NEW YORK 11201 (\$2.00).
CURRICULUM BULLETIN 10; 1963-64 SERIES.
PUB DATE - 65 121P.

DESCRIPTORS - *WOODWORKING; GRADE 10; *TEACHING GUIDES; *INDUSTRIAL ARTS

ABSTRACT - THIS CURRICULUM, BASED ON MATERIAL OUTLINED IN THE "COURSE OF STUDY IN INDUSTRIAL ARTS--GRADES 10, 11, 12," (CURRICULUM BULLETIN NO. 6, 1954-55 SERIES) IS DESIGNED FOR A BEGINNING COURSE AT THE SENIOR HIGH LEVEL. THE CONTENT CONCERNS HAND TOOL AND MACHINE OPERATIONS AND PRESENTS SEVERAL SAMPLE PROJECTS SUITABLE FOR INDIVIDUAL OR MASS PRODUCTION. SAMPLE PLAN SHEETS, LESSON PLANS, INFORMATION SHEETS, TESTS AND PROJECT PLANS ARE GIVEN. CHAPTER TITLES ARE: (1) INTRODUCTION, (2) COURSE CONTENT, (3) THE BASIC CONTENT, (4) THE LATHE PROJECT, (5) THE MASS PRODUCTION PROJECT, (6) THE GROUP PROJECT, (7) THE INDIVIDUAL PROJECT, AND (8) TESTING IN THE SHOP.

BIBLIOGRAPHIC ITEMS, WITH DATES RANGING FROM 1935 TO 1963, INCLUDE: TESTS, FILMS, FILMSTRIPS, CHARTS, AND BOOKLETS. (EM)

VT 001 359

INDUSTRIAL ARTS. CAREER GUIDANCE SERIES.
CURRICULUM BULLETIN, 1966-67 SERIES NO. 8J.

NEW YORK CITY BOARD OF EDUCATION, N.Y.
BOARD OF EDUCATION OF THE CITY OF NEW YORK, PUBLICATIONS SALES OFFICE, 110 LIVINGSTON STREET, BROOKLYN, NEW YORK 11201 (\$2.00).
PUB DATE - 66 189P.

DESCRIPTORS - *INDUSTRIAL ARTS; *RESOURCE MATERIALS; *JUNIOR HIGH SCHOOLS; *CAREER PLANNING; POWER MECHANICS; CONSTRUCTION INDUSTRY; BUILDING TRADES; OFFICE MACHINES

ABSTRACT - THIS RESOURCE GUIDE IS FOR TEACHERS OF INDUSTRIAL ARTS IN THE CAREER GUIDANCE PROGRAM TO USE IN PROVIDING PUPILS WITH INDUSTRIAL ACTIVITIES AND RELATED ACADEMIC EXPERIENCES AT THE JUNIOR HIGH SCHOOL LEVEL. IT WAS DEVELOPED BY A GROUP OF SUPERVISORS AND TEACHERS AS AN EXPERIMENTAL STUDY TO CREATE A PROGRAM FOR POTENTIAL DROPOUT STUDENTS AND REVISED DURING THREE YEARS OF TRIAL AND EVALUATION. THE GUIDE PRESENTS SUGGESTED METHODS, MATERIALS, AND INSTRUCTIONAL AIDS IN FOUR AREAS: (1) GENERAL CONSTRUCTION AND REPAIR, (2) BUILDING CONSTRUCTION AND MAINTENANCE, (3) POWER MECHANICS, AND (4) OFFICE DUPLICATING MACHINES. EACH AREA CONTAINS A LIST OF PROCESSES AND SKILLS TO BE TAUGHT, RELATED ACADEMIC LEARNINGS TO BE DEVELOPED, MATERIALS, TOOLS, AND EQUIPMENT TO BE USED, AND SUGGESTED RESOURCE LESSONS. A RELATED SUPPLEMENT IS AVAILABLE AS VT 000 239 (ALSO IN THIS ISSUE). (GR)

VT 001 479

WILLIAMS, KENNETH E.
INDUSTRIAL EDUCATION IN HAMPTON SCHOOL SYSTEM, 1966-1967 .

HAMPTON PUBLIC SCHOOLS, VA.
PUB DATE - 66 154P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *TRADE AND INDUSTRIAL EDUCATION; CURRICULUM; SENIOR HIGH SCHOOLS; *INDUSTRIAL EDUCATION; *PROGRAM GUIDES; JUNIOR HIGH SCHOOLS

ABSTRACT - THE PURPOSE OF THIS GUIDE IS TO HELP TEACHERS COORDINATE THE INDUSTRIAL ARTS CURRICULUM. IT WAS COMPILED AND WRITTEN BY TEACHERS UNDER THE DIRECTION OF THE VOCATIONAL AND INDUSTRIAL ARTS SUPERVISOR. JUNIOR HIGH SCHOOL COURSE OUTLINES INCLUDED ARE INDUSTRIAL ARTS I, II, III, IV, AND SUPPLEMENTARY AREAS PLASTICS, POWER MECHANICS, LEATHER, CERAMICS, AND BASIC ELECTRICITY AND ELECTRONICS. SENIOR HIGH SCHOOL COURSE OUTLINES INCLUDED ARE DRAFTING, ARCHITECTURAL DRAFTING, WOODWORK, METALS, GRAPHIC ARTS, ELECTRONICS, MASONRY, AND METAL CLUSTER. EACH COURSE OUTLINE GIVES: (1) TIME REQUIRED, (2) TOPIC, (3) TOPIC OBJECTIVE, AND (4) RESOURCE MATERIALS AND AIDS. THE INDUSTRIAL ARTS COURSES OFFERED BY THE

IND ARTS

7

DIFFERENT SCHOOLS IN THE SYSTEM AND A LIST OF TEACHERS ARE GIVEN. (EM)

VT 001 686

INDUSTRIAL ARTS ELECTRICITY-ELECTRONICS, GRADES 7-12. COURSE GUIDE.

TEXAS INDUSTRIAL ARTS ASSOCIATION
TEXAS EDUCATION AGENCY, AUSTIN
TEXAS EDUCATION AGENCY, 201 EAST ELEVENTH,
AUSTIN, TEXAS 78712 (\$20).
PUB DATE - OCT66 56P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *ELECTRICITY; *ELECTRONICS; SECONDARY GRADES; EDUCATIONAL FACILITIES

ABSTRACT - THIS CURRICULUM GUIDE WAS DEVELOPED BY STATE SUPERVISORS AND TEACHER EDUCATORS TO PROVIDE TEACHERS WITH INFORMATION USEFUL IN ORGANIZING AND TEACHING ELECTRICITY AND ELECTRONICS IN INDUSTRIAL ARTS. "INTRODUCTORY ELECTRICITY" OUTLINES A CURRICULUM FOR GRADES 7 OR 8 WHICH HAS NO PREREQUISITE AND WHICH CAN BE ONE OR TWO SEMESTERS IN LENGTH. "GENERAL ELECTRICITY" OUTLINES A CURRICULUM WHICH MAY BE USED IN GRADE 9, 10, 11, OR 12 IN WHICH THE FIRST SEMESTER SERVES AS A PREREQUISITE FOR THE SECOND SEMESTER. "BASIC ELECTRONICS" OUTLINES A CURRICULUM FOR GRADES 10, 11 OR 12 WHICH REQUIRES "GENERAL ELECTRICITY" AS A PREREQUISITE AND THE FIRST SEMESTER AS A PREREQUISITE FOR THE SECOND. COURSE OBJECTIVES, INSTRUCTIONAL ORGANIZATION AND MATERIALS, AND COURSE OUTLINES ARE GIVEN FOR EACH OF THESE LEVELS. SUPPLEMENTARY MATERIALS INCLUDE: (1) OUTLINE FOR PLAN SHEET, (2) FACILITIES RECOMMENDATIONS, (3) EQUIPMENT LIST, (4) SHOP FLOOR PLANS, AND (5) SELECTED BIBLIOGRAPHY OF TEXTBOOKS. (EM)

VT 001 858

TAYLOR, ARLIN
CAREER EDUCATION RESOURCE GUIDE.

NAPA COUNTY SUPERINTENDENT OF SCHOOLS, CALIF.
PUB DATE - NOV66 68P.

DESCRIPTORS - *BIBLIOGRAPHIES; *FILMS; *FILMSTRIPS; *EDUCATIONAL RESOURCES; *INDUSTRIAL ARTS; OCCUPATIONAL INFORMATION

ABSTRACT - THIS GUIDE CONTAINS A LIST OF BUSINESS AND OTHER ESTABLISHMENTS WHICH PROVIDE GUIDANCE OR EDUCATIONAL RESOURCES, AND AN ANNOTATED BIBLIOGRAPHY OF EDUCATIONAL FILMS. FOR EACH ESTABLISHMENT INFORMATION IS GIVEN FOR (1) AVAILABILITY OF TOURS, SPEAKERS, AND REFERENCE MATERIALS, (2) CONTACT PERSONS, (3) PRODUCTS, AND (4) EMPLOYMENT REQUIREMENTS. THE BIBLIOGRAPHY LISTS 219 FILMS AND FILMSTRIPS CATEGORIZED UNDER THE SUBJECTS: (1) AUTO, (2) CRAFTS, (3) ELECTRICITY, (4) MECHANICAL DRAWING, (5) METALS, AND (6) WOOD. THE FILM ANNOTATIONS WERE WRITTEN BY INDUSTRIAL ARTS INSTRUCTORS. FILM SOURCES ARE GIVEN. (EM)

VT 001 958

INDUSTRIAL ARTS CURRICULUM PLANNING GUIDE, GRADES 7-12.

IDAHO STATE DEPT. OF EDUCATION, BOISE. DIV. OF INSTRUCTION
PUB DATE - 6DEC63 133P.

DESCRIPTORS - *INDUSTRIAL ARTS; CURRICULUM GUIDES; *SECONDARY EDUCATION; *PROGRAM DESCRIPTIONS; EDUCATIONAL PHILOSOPHY; EDUCATIONAL OBJECTIVES; *STATE CURRICULUM GUIDES; COURSE DESCRIPTIONS; COURSE OBJECTIVES; COURSE ORGANIZATION; INSTRUCTIONAL MATERIALS

ABSTRACT - DEVELOPED BY AN INDUSTRIAL ARTS COMMITTEE AT THE STATE LEVEL, THIS STATE CURRICULUM GUIDE IS FOR TEACHER USE IN PLANNING AND IMPLEMENTING COURSES FOR STUDENTS IN ALL AREAS OF INDUSTRIAL ARTS FROM GRADES 7-12. THE PROGRAM IS PYRAMIDED, BEGINNING WITH A GENERAL COURSE AT THE JUNIOR HIGH LEVEL OFFERED 55 MINUTES PER DAY, 5 DAYS A WEEK, AND PROGRESSING TO A HIGH DEGREE OF SPECIALIZATION FOR GRADES 11-12, STRUCTURED SO THAT A STUDENT MAY TAKE ONE OR MORE COURSES FOR 2 SUCCESSIVE YEARS. COURSE DESCRIPTION, COURSE OBJECTIVES, INSTRUCTIONAL ACTIVITIES, AND INSTRUCTIONAL UNITS ARE GIVEN FOR THE 22 COURSES, WITH MAJOR EMPHASIS ON DRAWING, WOODWORK, ELECTRICITY, AND METALS, BUT PROVISION ALSO FOR THE NEWER CRAFT AREAS SUCH AS PLASTICS, LEATHER, ART METAL, MOSAICS, AND CERAMICS. A FINAL SECTION ON CURRICULUM IMPLEMENTATION OFFERS SUGGESTIONS TO THE INSTRUCTOR CONCERNING STUDENT PROJECTS, PROJECT PLANNING, RESOURCE MATERIAL, AND SHOP SAFETY. (GR)

VT 002 002 ED 021 963

HASTINGS, JAMES R., ED.
CERAMICS, PROJECT IDEAS FOR INDUSTRIAL ARTS.

NEW YORK STATE EDUCATION DEPT., ALBANY.
BUREAU OF SECONDARY CURRICULUM DEVELOPMENT
PUB DATE - 66 185P.

DESCRIPTORS - *RESOURCE UNITS; *INDUSTRIAL ARTS; *CERAMICS; JUNIOR HIGH SCHOOLS; SENIOR HIGH SCHOOLS; *STUDENT PROJECTS

ABSTRACT - THIS BOOK OF CERAMIC PROJECT IDEAS IS FOR TEACHER OR STUDENT USE IN SECONDARY INDUSTRIAL ARTS COURSES. IT WAS DEVELOPED IN A WORKSHOP BY TEACHERS. THE CONTENT OBJECTIVES ARE TO PROVIDE USEFUL PROJECTS AND UNITS OF INSTRUCTION AND TO GIVE DIRECTION TO CERAMICS INSTRUCTION WHICH IS IN KEEPING WITH A CHANGING TECHNOLOGY. FORTY-ONE PROJECT PLANS ARE PRESENTED UNDER THESE UNITS: (1) HAND FORMING, (2) SLAB CONSTRUCTING, (3) FREE FORMING, (4) PRESS MOLDING, (5) SOLID CASTING, (6) SLIP CASTING, (7) EXTRUDING, (8) THROWING AND TURNING, AND (9) JIGGERING. EACH UNIT GIVES PROJECT PLANS, STUDENT ACTIVITIES, PROJECT PROCEDURES, RELATED TECHNICAL INFORMATION, TEACHER DEMONSTRATIONS, RELATED CULTURAL INFORMATION, AND REFERENCES. SIMILARLY ORGANIZED UNITS COVER 13 TOOLS OR PIECES OF EQUIPMENT SUCH AS A JIGGER ARM, STILTS, AN EXTRUSION PRESS, AND A TURNING BOX. INFORMATION CONCERNING THE MAKING OF GLAZES IS ALSO INCLUDED. SUPPLEMENTARY MATERIALS INCLUDE A GLOSSARY OF CERAMIC TERMS, A BIBLIOGRAPHY OF BOOKS AND PERIODICALS, AND INDEXES TO RELATED TECHNICAL

AND CULTURAL TOPICS. (EM)

VT 002 004

AN EXPERIMENTAL RESOURCE UNIT IN PLASTICS FOR INDUSTRIAL ARTS.

NEW YORK STATE EDUCATION DEPT., ALBANY.
BUREAU OF SECONDARY CURRICULUM DEVELOPMENT.
THE PUBLICATIONS DISTRIBUTION UNIT, STATE
EDUCATION DEPARTMENT, ALBANY, NEW YORK 12224
(SINGLE COPIES AVAILABLE).
PUB DATE - 66 218P.

DESCRIPTORS - *RESOURCE UNITS; *INDUSTRIAL ARTS; SECONDARY GRADES; *PLASTICS; BIBLIOGRAPHIES; *CURRICULUM GUIDES; *TEACHING GUIDES; LESSON PLANS; SUPPLIES; DIRECTORIES; CURRICULUM DEVELOPMENT

ABSTRACT - DEVELOPED BY THE BUREAU OF SECONDARY CURRICULUM DEVELOPMENT FOR THE NEW YORK STATE EDUCATION DEPARTMENT, THIS RESOURCE UNIT IS FOR USE IN MODIFYING INDUSTRIAL ARTS INSTRUCTION IN THE SECONDARY GRADES TO PROVIDE FOR PLASTIC INSTRUCTION. THESE MATERIALS WERE DEVELOPED WITH TWO PURPOSES IN MIND: (1) TO PROVIDE A GUIDE FOR CONTENT AND DEVELOPMENT OF LOCALLY DESIGNED COURSES OF STUDY, AND (2) TO PROVIDE THE MOST ENRICHED AND COMPLETE OUTSIDE RESOURCE MATERIALS WHICH COULD BE IDENTIFIED. THE CONTENTS HAVE BEEN ARRANGED IN 12 MAJOR UNITS: (1) ORIENTATION, (2) MOLDING AND FORMING, (3) MOLDMAKING, (4) BONDING, (5) LAMINATES, (6) ENCAPSULATION, (7) FORMS, (8) COATING, (9) VINYL DISPERSION-THERMOFUSION, (10) DECORATING, (11) MATERIALS, AND (12) GUIDANCE. SUPPLY LISTS AND SOURCES OF SUPPLIES ARE CONTAINED IN THE APPENDIX. THE BIBLIOGRAPHY IS DIVIDED INTO THREE SECTIONS: (1) BASIC LIBRARY REFERENCES, (2) SUPPLEMENTAL REFERENCE LIST, AND (3) FREE OR INEXPENSIVE REFERENCES. (GEB)

VT 002 009 ED 022 843

INDUSTRIAL ARTS HUMANITIES MEDIA GUIDE: CUE .

NEW YORK STATE EDUCATION DEPT., ALBANY
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
PUB DATE - 65 117P.

DESCRIPTORS - *CURRICULUM GUIDES; *TEACHING GUIDES; *INDUSTRIAL ARTS; GRADE 9; *HUMANITIES; INSTRUCTIONAL MATERIALS; CULTURAL ENRICHMENT IDENTIFIERS - *PROJECT CUE

ABSTRACT - THIS CURRICULUM GUIDE IS FOR TEACHER USE IN COURSE AND LESSON PLANNING FOR NINTH GRADE INDUSTRIAL ARTS. IT WAS DEVELOPED BY PROJECT CUE (CULTURE, UNDERSTANDING, ENRICHMENT), A PROJECT FUNDED BY THE U.S. OFFICE OF EDUCATION, AS PART OF A GROUP OF MATERIALS DESIGNED TO INTEGRATE AND ENCOURAGE HUMANITIES INSTRUCTION IN VARIOUS SUBJECT AREAS. THE ORIGINAL MATERIALS WERE TRIED IN 13 PROJECT SCHOOLS AND REVISED BEFORE PUBLICATION. THIRTY LESSONS WERE ORGANIZED UNDER THE FOLLOWING HEADINGS: (1) ARCHITECTURE AND CONSTRUCTION, (2) CERAMICS, (3) GRAPHIC ARTS, (4) INDUSTRIAL DESIGN, (5) LEATHER, (6) METALWORKING, (7) PHOTOGRAPHY, (8) TEXTILES, AND (9) WOODWORKING. EACH OF

THE LESSONS PROVIDES (1) THE TITLES OF INSTRUCTIONAL MATERIALS SUCH AS FILMS, PAMPHLETS, OR PHOTOGRAPHS, (2) LESSON OBJECTIVES, (3) A LESSON SYNOPSIS BASED ON THE INSTRUCTIONAL MATERIAL, (4) SUGGESTED TEACHER PREPARATION, (5) KEY TERMINOLOGY, (6) SUGGESTED STUDENT ACTIVITIES DURING AND FOLLOWING THE LESSON, AND (7) SUGGESTED OPTIONAL INTELLECTUAL AND CREATIVE STUDENT ACTIVITIES. THE DESIGNATED INSTRUCTIONAL MATERIALS SERVE AS THE FOCUS FOR EACH LESSON AND EACH WAS SELECTED FOR A PARTICULAR CULTURAL PURPOSE WHICH IS EXPRESSED IN THE OBJECTIVES. ALSO INCLUDED IS A LIST OF SOURCES FOR THE INSTRUCTIONAL MATERIALS. (EM)

VT 002 032

SPINTI, ROBERT J., COMP.
APPLIED ELECTRICITY. (INDUSTRIAL ARTS SERIES).

MISSOURI UNIV., COLUMBIA. DEPT. OF INDUSTRIAL EDUCATION
MISSOURI STATE DEPT. OF EDUCATION, JEFFERSON CITY. INDUSTRIAL EDUCATION SECTION
PUB DATE - SEP63 162P.

DESCRIPTORS - CURRICULUM GUIDES; *TEACHING GUIDES; *TRADE AND INDUSTRIAL EDUCATION; *ELECTRICITY; HIGH SCHOOLS; BIBLIOGRAPHIES; REFERENCE MATERIALS; INSTRUCTIONAL FILMS; COOPERATIVE EDUCATION; ASSIGNMENTS; TESTS; ANSWER KEYS; EDUCATIONAL EQUIPMENT

ABSTRACT - THE PURPOSE OF THE COURSE OF STUDY IS TO ASSIST THE TEACHER IN ESTABLISHING OR REVISING A COURSE IN BASIC APPLIED ELECTRICITY ON THE SECONDARY LEVEL. PREPARATION WAS DONE BY A GRADUATE RESEARCH ASSISTANT IN COOPERATION WITH AN ADVISORY COMMITTEE, SUBJECT MATTER SPECIALISTS, AND TEACHER EDUCATORS. MAJOR DIVISIONS ARE--(1) FUNDAMENTALS OF ELECTRICITY, (2) MAGNETISM AND ELECTROMAGNETISM, (3) SOURCES AND DISTRIBUTION OF ELECTRICAL ENERGY, (4) ELECTRICAL CONDUCTORS AND HEAT, (5) LIGHT AND ELECTRICITY, (6) RESIDENTIAL WIRING, (7) MOTORS, (8) CONTROLS, (9) APPLIANCES, (10) AUTOMOTIVE ELECTRICITY, AND (11) ELECTRONICS. LENGTH OF THE COURSE SHOULD PROVIDE FOR 360 HOURS OF RELATED INSTRUCTION AND LABORATORY EXPERIENCE. INCLUDED ARE 29 JOB ASSIGNMENT SHEETS AND 21 INFORMATIONAL ASSIGNMENT SHEETS KEYED TO THE 26 TEXTBOOKS LISTED. THE BIBLIOGRAPHY LISTS 29 REFERENCE MATERIALS, 83 FILMS, 10 PERIODICALS, AND 38 INSTRUCTIONAL MATERIALS. A SUGGESTED FLOORPLAN, EQUIPMENT AND TOOL LIST WITH PRICES, AND SUPPLY SOURCE LIST ARE ALSO GIVEN. THE APPENDIX CONTAINS TWO EXAMINATIONS AND THEIR KEYS. (EM)

VT 002 112

A GUIDE FOR TEACHING POWER MECHANICS IN INDUSTRIAL ARTS IN INDIANA.

INDIANA STATE DEPT. OF PUBLIC INSTRUCTION,
INDIANAPOLIS
PUB DATE - NO 70P.

DESCRIPTORS - *INDUSTRIAL ARTS; *POWER MECHANICS; *STATE CURRICULUM GUIDES; SECONDARY EDUCATION; *TEACHING GUIDES; COURSE DESCRIPTIONS; COURSE ORGANIZATION; PROGRAM

IND ARTS

9

CONTENT; UNITS OF STUDY (SUBJECT FIELDS);
BIBLIOGRAPHIES; LABORATORY EQUIPMENT;
INSTRUCTIONAL MATERIALS

ABSTRACT - DEVELOPED BY A GROUP OF TEACHER EDUCATORS, STATE AND LOCAL ADMINISTRATORS, AND HIGH SCHOOL TEACHERS, THIS GUIDE IS FOR TEACHER USE IN PLANNING A COURSE OF STUDY IN POWER MECHANICS FOR GRADES 7 THROUGH 12. FOLLOWING A LIST OF GENERAL OBJECTIVES IS THE TEACHING OUTLINE OF UNITS IN: (1) INTRODUCTION TO POWER MECHANICS, (2) POWER GENERATION THROUGH PRIME MOVERS, (3) POWER MEASUREMENT, (4) POWER TRANSMISSION, (5) FUELS AND LUBRICANTS, (6) INTERNAL COMBUSTION ENGINES, (7) STEAM, AND (8) ATOMIC AND SOLAR ENERGY. EACH UNIT INCLUDES TEACHING ACTIVITIES, STUDENT ACTIVITIES, JUNIOR HIGH OR SENIOR HIGH SCHOOL LEVEL, TECHNICAL CONTENT OUTLINE, TEXT REFERENCES, AND AUDIO-VISUAL MATERIALS. A TEXT AND REFERENCE LIST, AN AUDIO-VISUAL MATERIALS AND SOURCE ADDRESS LIST, SUGGESTED LABORATORY FACILITIES AND INSTRUCTIONAL EQUIPMENT, SOURCES FOR INSTRUCTIONAL MATERIALS, AND SOURCES FOR FREE AND INEXPENSIVE TEACHING MATERIALS ARE APPENDED. (GR)

VT 002 345

WOODWARD, ROBERT L.
INDUSTRIAL ARTS SAFETY INSTRUCTION.

CALIFORNIA STATE DEPT. OF EDUCATION,
SACRAMENTO
PUB DATE - 66 70P.

DESCRIPTORS - *INDUSTRIAL ARTS EDUCATION;
*SAFETY EDUCATION; *LABORATORY SAFETY; SAFETY EQUIPMENT; ACCIDENT PREVENTION; *EQUIPMENT UTILIZATION; INSTRUCTIONAL MATERIALS;
*TEACHING GUIDES; RESOURCE GUIDES; FIRE PROTECTION

ABSTRACT - BASED UPON A STUDY CONDUCTED BY THE AUTHOR, A CONSULTANT IN INDUSTRIAL ARTS EDUCATION, THIS GUIDE IS FOR TEACHER AND STUDENT USE IN PROVIDING SAFETY INSTRUCTION AND EVALUATION OF SAFETY INSTRUCTION IN THE USE OF TOOLS AND EQUIPMENT IN INDUSTRIAL ARTS COURSES WAS PREPARED TO: (1) HELP THE INDUSTRIAL ARTS TEACHER IN SMALL SCHOOLS MEET SAFETY NEEDS, (2) SERVE AS A BASIS FOR REORGANIZING EXISTING SAFETY PROGRAMS, (3) MEET CERTAIN LEGAL REQUIREMENTS OF ACCIDENT LIABILITY AND REQUIRED SAFETY INSTRUCTION, AND (4) PROVIDE A BASIS FOR CARRYING OUT THE RULES AND REGULATIONS OF THE STATE SAFETY DIVISION. SECTIONS INCLUDE SAFETY INSTRUCTIONS FOR METALWORKING EQUIPMENT, WOODWORKING EQUIPMENT, AUTOMOTIVE AND POWER MECHANICS EQUIPMENT, ELECTRICAL AND ELECTRONIC EQUIPMENT, AND GRAPHIC ARTS EQUIPMENT. THE SECTIONS ALSO INCLUDE SAFETY TEST QUESTIONS AND ANSWERS. (GR)

VT 002 504

ADMINISTRATIVE GUIDELINES FOR INDUSTRIAL EDUCATION, GRADES 7-12.

NEBRASKA INDUSTRIAL EDUCATION ADVISORY COMMITTEE
NEBRASKA STATE DEPT. OF EDUCATION, LINCOLN
DIVISION OF VOCATIONAL EDUCATION, STATE

DEPARTMENT OF EDUCATION, 10TH FLOOR, STATE CAPITOL, P.O. BOX 94727, LINCOLN, NEBRASKA 68509
PUB DATE - AUG66 52P.

DESCRIPTORS - *ADMINISTRATOR GUIDES;
*INDUSTRIAL EDUCATION; *GUIDELINES; SECONDARY GRADES; INDUSTRIAL ARTS; TRADE AND INDUSTRIAL EDUCATION; ORGANIZATION; PROGRAM PLANNING; CURRICULUM

ABSTRACT - DEVELOPED BY STATE SUPERVISORS, TEACHER EDUCATORS, AND SUBJECT MATTER SPECIALISTS, THIS ADMINISTRATIVE GUIDE WAS DESIGNED TO AID SCHOOL ADMINISTRATORS AND TEACHERS IN THE DEVELOPMENT OF QUALITY PROGRAMS IN INDUSTRIAL ARTS AND VOCATIONAL EDUCATION FOR GRADES 7 THROUGH 12. FOLLOWING A PICTORIAL REPRESENTATION OF INDUSTRIAL EDUCATION SHOP ORGANIZATION ARE GUIDELINES ON PROGRAM BELIEFS AND OBJECTIVES, STUDENT FLOW WITHIN THE PROGRAM, SAFETY AND SCHOOL SHOP PLANNING, TEACHER PREPARATION, AND REIMBURSABLE VOCATIONAL PROGRAMS. THE CURRICULUM FOR THE SECONDARY GRADES INDUSTRIAL EDUCATION PROGRAM IS PRESENTED THROUGH THE USE OF AN INTRODUCTORY STATEMENT, A LIST OF OBJECTIVES, AND A CONTENT LIST FOR EACH COURSE. COURSES OUTLINED FOR THE JUNIOR HIGH SCHOOL ARE INDUSTRIAL, CRAFTS, DRAFTING, ELECTRICITY-ELECTRONICS, GRAPHIC ARTS, METALWORKING, INTRODUCTORY POWER MECHANICS, AND WOODWORKING. SENIOR HIGH SCHOOL COURSES PRESENTED ARE DRAFTING, ELECTRICITY-ELECTRONICS, GRAPHIC ARTS, METALWORKING, POWER MECHANICS, AND WOODWORKING. APPENDED ARE LISTS OF PUBLISHERS, PERIODICALS, AND PROGRAM TERMINOLOGY. (EM)

VT 002 506

KLABENES, ROBERT E., AND OTHERS
NEBRASKA INDUSTRIAL EDUCATION CURRICULUM GUIDE, GRADES 7-12L.

NEBRASKA STATE DEPT. OF EDUCATION, LINCOLN
NEBRASKA INDUSTRIAL EDUCATION ADVISORY COMMITTEE
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
PUB DATE - 66 52P.

DESCRIPTORS - *STATE CURRICULUM GUIDES;
*TRADE AND INDUSTRIAL EDUCATION; *INDUSTRIAL ARTS; COURSE OBJECTIVES; CURRICULUM GUIDES; JUNIOR HIGH SCHOOLS; SENIOR HIGH SCHOOLS;
*PREVOCATIONAL EDUCATION
IDENTIFIERS - NEBRASKA

ABSTRACT - THIS CURRICULUM GUIDE IS FOR USE IN COURSE PLANNING FOR JUNIOR AND SENIOR HIGH SCHOOL INDUSTRIAL EDUCATION. IT WAS DEVELOPED BY A STATE ADVISORY COMMITTEE TO PROVIDE SUGGESTIONS FOR LOCAL COURSES OF STUDY. JUNIOR HIGH LEVEL COURSE OUTLINES ARE GIVEN FOR (1) ART METAL, (2) LEATHERCRAFT, (3) PLASTICS, (4) DRAFTING, (5) ELECTRICITY-ELECTRONICS, (6) GRAPHIC ARTS, (7) POWER MECHANICS, (8) METALWORKING, AND (9) WOODWORKING. SENIOR HIGH LEVEL COURSE OUTLINES ARE GIVEN FOR (1) DRAFTING, (2) ELECTRICITY-ELECTRONICS, (3) GRAPHIC ARTS, (4) METALWORKING, (5) POWER MECHANICS, AND (6) WOODWORKING. SUPPLEMENTARY MATERIALS INCLUDE A PHILOSOPHICAL STATEMENT, PROGRAM ORGANIZATION CHARTS, AND A PERIODICAL

BIBLIOGRAPHY. (EM)

VT 002 559 ED 032 381
SCIENTIFIC AND ENGINEERING INFLUENCES ON
INDUSTRIAL ARTS. A SUMMARY OF INSTITUTE
ACTIVITIES (NOEA SUMMER INST., COLLEGE
STATION, TEX.).

TEXAS A AND M UNIV., COLLEGE STATION. DEPT.
OF INDUSTRIAL EDUCATION
PUB DATE - 67 229P.

DESCRIPTORS - *INDUSTRIAL ARTS; SECONDARY
GRADES; *LABORATORY EXPERIMENTS; *INSERVICE
TEACHER EDUCATION; *INDUSTRIAL ARTS TEACHERS;
SCIENCE EXPERIMENTS; TEACHING GUIDES;
BIBLIOGRAPHIES; RESOURCE MATERIALS;
CURRICULUM DEVELOPMENT

ABSTRACT - THESE UNITS DEVELOPED FOR TEACHER
USE CONSIST PRIMARILY OF A COLLECTION OF
TYPICAL EXPERIMENTS OR RESEARCH ACTIVITIES
DEVELOPED BY STAFF AND PARTICIPANTS OF A
NATIONAL DEFENSE EDUCATION ACT INSTITUTE. THE
INSTITUTE WAS DESIGNED TO BROADEN THE
VIEWPOINT OF 25 INDUSTRIAL ARTS TEACHERS WITH
REGARD TO SOME OF THE NEWER SCIENTIFIC AND/OR
ENGINEERING DISCIPLINES. EACH EXPERIMENT OR
ACTIVITY FOLLOWS A GENERAL OUTLINE OF: TITLE,
OBJECTIVES, INTRODUCTION, REFERENCES,
DEFINITIONS, EQUIPMENT AND MATERIALS NEEDED,
PROCEDURES, AND QUESTIONS. TEXTUAL MATERIAL
IS PRESENTED FOR THE TOPICS OF: (1)
ADHESIVES, (2) DRAWING, (3) ELECTRICITY-
ELECTRONICS, (4) FINISHES, (5) FOREST
PRODUCTS, (6) FUELS AND LUBRICANTS, (7)
METALS, AND (8) OTHER SUGGESTED EXPERIMENTAL
ACTIVITIES. (GR)

VT 002 650
GUIDE LINES FOR THE JUNIOR HIGH SCHOOL
INDUSTRIAL ARTS PROGRAM OF CHAMPAIGN
COMMUNITY UNIT NO. 4, CHAMPAIGN, ILLINOIS.

CHAMPAIGN COMMUNITY UNIT 4 SCHOOL DISTRICT,
ILL.
CHAMPAIGN COMMUNITY SCHOOL UNIT NO. 4, 703
SOUTH NEW, CHAMPAIGN, ILLINOIS (\$5.00).
PUB DATE - 16JUN66 301P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; JUNIOR HIGH SCHOOLS; DRAFTING;
ELECTRICITY; METALS; PLASTICS; POWER
MECHANICS; PRINTING; WOODWORKING; *COURSE
CONTENT

ABSTRACT - DEVELOPED BY A COMMITTEE OF
INDUSTRIAL ARTS TEACHERS, THIS CURRICULUM
GUIDE IS FOR TEACHER USE IN CO-ORDINATING
JUNIOR HIGH SCHOOL INDUSTRIAL ARTS PROGRAMS.
GENERAL OBJECTIVES AND A COURSE ANALYSIS AS
WELL AS UNIT OUTLINES CONTAINING SPECIFIC
OBJECTIVES, STUDY OUTLINE, AND REFERENCES ARE
OFFERED FOR THESE SUBJECTS: DRAFTING,
ELECTRICITY, GENERAL METALS, PLASTICS, POWER
MECHANICS, PRINTING, AND WOODWORKING. THE
MATERIAL IS DESIGNED TO BE USED OVER ONE
SEMESTER OR A FULL YEAR BY INDIVIDUAL UNITS.
(GR)

VT 002 778 ED 022 849
EDWIN, WILLIAM R., JR.

IND ARTS

INDUSTRIAL ARTS; A GUIDE FOR COLORADO
SCHOOLS .

COLORADO STATE DEPT. OF EDUCATION, DENVER.
DIV. OF ELEMENTARY SECONDARY EDUCATION
OFFICE OF INSTRUCTIONAL SERVICES, DIVISION OF
ELEMENTARY AND SECONDARY EDUCATION, COLORADO
STATE DEPARTMENT OF EDUCATION, DENVER,
COLORADO 80203 (\$2.50).
PUB DATE - APR66 215P.

DESCRIPTORS - *PROGRAM GUIDES; *CURRICULUM
GUIDES; *INDUSTRIAL ARTS; HIGH SCHOOLS;
ELEMENTARY SCHOOLS

ABSTRACT - THIS PROGRAM GUIDE IS FOR TEACHER
USE IN PLANNING AND OPERATING A LOCAL
INDUSTRIAL ARTS PROGRAM. IT WAS DEVELOPED BY
A COMMITTEE OF THE COLORADO INDUSTRIAL ARTS
ASSOCIATION. THE GUIDE PRESENTS MAJOR
CONCEPTS AND INFORMATION FOR A COMPREHENSIVE
PROGRAM OF ELEMENTARY AND SECONDARY
INDUSTRIAL ARTS, AND IT SUGGESTS A VARIETY OF
EDUCATIONAL ACTIVITIES AND METHODS. MAJOR
CHAPTERS ARE (1) THE PLACE OF INDUSTRIAL ARTS
IN THE GENERAL EDUCATION PROGRAMS, (2)
ORGANIZATION AND ADMINISTRATION IN THE
INDUSTRIAL ARTS CLASSROOM, (3) SHOP PLANNING
AND MAINTENANCE, (4) SAFETY AND LIABILITY,
(5) FUNDAMENTALS OF DESIGN, (6) STUDENT
EVALUATION, (7) HISTORIC BACKGROUND AND
CURRENT TRENDS IN INDUSTRIAL ARTS EDUCATION,
(8) THE GENERAL SHOP, (9) GENERAL CRAFTS,
(12) MECHANICAL DRAFTING, (13) GENERAL
METALS, (14) POWER MECHANICS, AND (15)
WOODWORKING. MOST CHAPTERS INCLUDE
INFORMATION, CONTENT OUTLINES, PHOTOGRAPHS OF
FACILITIES OR PROJECTS, AND AN EXTENSIVE
BIBLIOGRAPHY OF REFERENCES. (EM)

VT 002 860
AMERICAN INDUSTRY TECHNICAL REPORT, 1965-66 .

STOUT STATE UNIV., MENOMONIE, WIS.
DEC-5-85-060
PUB DATE - 66 28P.

DESCRIPTORS - INDUSTRY; ANNUAL REPORTS;
*INDUSTRIAL ARTS; *EXPERIMENTAL PROGRAMS;
*CURRICULUM DEVELOPMENT;
*INSTRUCTIONAL MATERIALS; PILOT PROJECTS;
TEACHER EDUCATION CURRICULUM; *PROGRAM
ADMINISTRATION; PROGRAM EVALUATION;
HIGH SCHOOLS
IDENTIFIERS - *AMERICAN INDUSTRY PROJECT

ABSTRACT - THIS ANNUAL REPORT IS COMPOSED OF
REPORTS BY EACH OF THE SPECIALISTS IN THE
AMERICAN INDUSTRY PROJECT TO DEVELOP A NEW
CURRICULUM AREA FOR THE SECONDARY SCHOOL.
ACCOMPLISHMENTS IN CURRICULUM DEVELOPMENT
INCLUDED REFINING THE CONCEPTUAL STRUCTURE OF
INDUSTRIAL KNOWLEDGE, DEVELOPING OBJECTIVES
AND OUTLINES FOR SEVEN LEVEL I STUDENT TEXTS,
IDENTIFYING LESSON TOPICS FOR DEVELOPING AN
INSTRUCTOR'S GUIDE, AND MAINTAINING AND
IMPROVING THE CURRICULUM RESOURCE CENTER. THE
INSTRUCTIONAL MEDIA PERSONNEL SELECTED,
DEVELOPED, AND ORGANIZED SUITABLE AUDIOVISUAL
MATERIALS INCLUDING A FILM LIST,
ILLUSTRATIONS, SLIDES, TRANSPARENCIES, AND
OTHER MATERIALS. COORDINATING THE
PARTICIPATING CENTERS INCLUDED SUCH
ACTIVITIES AS PRELIMINARY PLANNING, MONTHLY

WORKSHOPS, OBSERVATION VISITS, AND SELECTION AND RETENTION OF PARTICIPATING TEACHERS AND SCHOOLS. WORK OF THE PILOT TEACHER EDUCATION PROGRAM CONSISTED OF REVIEWING LITERATURE, DEVELOPING A THEORETICAL TEACHER MODEL, DEVELOPING AN IDEAL CURRICULUM, PREPARING OUTLINES FOR AMERICAN INDUSTRY COURSES, ESTABLISHING CRITERIA FOR STUDENT SELECTION, AND SELECTING STUDENTS FOR THE TEACHER EDUCATION PROGRAM. ACTIVITIES OF THE RESEARCH SPECIALISTS ARE GROUPED INTO THE BROAD CATEGORIES OF DATA PROCESSING SYSTEM, PRESENTATIONS TO VARIOUS AUDIENCES, DEVELOPMENT OF MODELS FOR CONCEPT AREAS, AND PERSONAL DEVELOPMENT. GENERAL COMMENTS REGARDING THE YEAR'S WORK ARE PRESENTED BY THE CO-DIRECTORS. (HC)

VT 003 035

ZIEL, H.R.

INDUSTRIAL ARTS IN GENERAL EDUCATION .
RESEARCH REPORT I, 1966.

ALBERTA UNIV., EDMONTON. DEPT. OF INDUSTRIAL
AND VOCATIONAL EDUCATION
PUB DATE - 66-21P.

DESCRIPTORS - *INDUSTRIAL ARTS; *JUNIOR HIGH
SCHOOLS; *EXPERIMENTAL PROGRAMS; *PROGRAM
DESCRIPTIONS; EXPERIMENTAL GROUPS; CONTROL
GROUPS; *CURRICULUM EVALUATION; JUNIOR HIGH
SCHOOL STUDENTS; MULTIMEDIA INSTRUCTION
IDENTIFIERS - EDMONTON; CANADA

ABSTRACT - THE OBJECTIVES OF THIS
EXPERIMENTAL PROGRAM WERE TO PROVIDE (1) AN
ENVIRONMENT WHERE STUDENTS CAN REINFORCE AND
APPLY ACADEMIC DISCIPLINES, (2) EXPLORATORY
EXPERIENCES IN VARIOUS PRODUCTIVE ASPECTS OF
SOCIETY, (3) A SYNTHESIZING EDUCATIONAL
ENVIRONMENT, AND (4) AN INTRODUCTION TO THE
MULTIPLICITY OF CAREER OPPORTUNITIES DURING
GRADES SEVEN THROUGH 12. FOUR PROGRAM PHASES
WERE (1) A MULTIPLE ACTIVITY ENVIRONMENT
INVOLVING CERAMICS, GRAPHIC ARTS, PLASTICS,
WOODS, METALS, AND ELECTRICITY, (2)
INTRODUCTION TO SELECTED TECHNOLOGIES, (3)
THE ROLE AND FUNCTION OF MAN IN AN
INDUSTRIALLY ORIENTED SOCIETY, AND (4) THE
STUDY OF CLUSTERS OF TECHNOLOGIES WITHIN A
RESEARCH AND DEVELOPMENT CONTEXT. RESEARCH
CARRIED OUT DURING THE FIRST YEAR'S OPERATION
WAS TO DETERMINE THE FEASIBILITY OF FURTHER
DEVELOPMENTAL RESEARCH. A STRATIFIED SAMPLE
CONSISTED OF FIVE EXPERIMENTAL AND FIVE
MATCHED CONTROL GROUPS SELECTED ON THE BASIS
OF ACHIEVEMENT FROM GRADES EIGHT AND NINE.
THE EXPERIMENTAL TREATMENT WAS PHASE ONE OF
THE PROGRAM, FOR ONE YEAR. FINDINGS INCLUDED:
(1) GRADE NINE LOW-ACHIEVING BOYS IMPROVED IN
READING, LANGUAGE, AND SOCIAL STUDIES, (2)
GRADE EIGHT AVERAGE-ACHIEVING BOYS IMPROVED
IN LANGUAGE, (3) GRADE EIGHT MIXED-ABILITY
GIRLS IMPROVED IN MATHEMATICS AND SCIENCE,
(4) GRADE NINE LOWEST-ACHIEVING BOYS IMPROVED
IN ARITHMETIC CONCEPTS AND WORD AND PARAGRAPH
COMPREHENSION, AND (5) GRADE NINE HIGH-
ACHIEVING BOYS IMPROVED IN ALL ACADEMIC
ACHIEVEMENT. (EM)

VT 003 271

INDUSTRIAL ARTS CURRICULUM PLANNING GUIDE,
GRADES 7-12 .

IDAHO STATE DEPT. OF EDUCATION, BOISE. DIV.
OF INSTRUCTION
PUB DATE - 64 136P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; JUNIOR HIGH SCHOOLS; SENIOR HIGH
SCHOOLS; COURSE DESCRIPTIONS
IDENTIFIERS - IDAHO

ABSTRACT - THIS GUIDE WAS DEVELOPED BY A
STATE LEVEL COMMITTEE FOR USE IN COORDINATING
AND ENRICHING THE STATE'S INDUSTRIAL ARTS
PROGRAMS. SECTIONS I AND II PROVIDE A
PHILOSOPHY OF INDUSTRIAL ARTS, AND PRESENT
THE CURRICULUM FROM GRADES 7 THROUGH 12.
SECTION III PRESENTS DESCRIPTIONS,
OBJECTIVES, AND INSTRUCTIONAL ACTIVITIES FOR
(1) INDUSTRIAL ARTS I COVERING 1 YEAR OF
SKETCHING AND PROJECT PLANNING, PLASTICS, AND
INDUSTRIAL CRAFTS, (2) INDUSTRIAL ARTS II
COVERING 1 YEAR OF DRAWING, BENCH METAL,
ELECTRICITY, AND BENCH WOODWORK, (3)
INDUSTRIAL ARTS III COVERING ONE SEMESTER IN
EACH OF FOUR AREAS--GENERAL DRAFTING, MACHINE
WOODWORK, GENERAL METALS, AND ELECTRICITY AND
BASIC ELECTRONICS, AND (4) ADVANCED
INDUSTRIAL ARTS COVERING 1-YEAR COURSES IN
EACH OF FOUR AREAS--DRAFTING, WOODWORK,
METALS, AND ELECTRICITY AND ELECTRONICS. AN
OUTLINE OF THE COURSE UNITS, STUDENT SKILLS
AND OPERATIONS, AND RELATED INFORMATION FOR
EACH OF THE 22 COURSES ARE PROVIDED. SECTION
IV DISCUSSES IMPLEMENTATION OF THE
CURRICULUM. (EM)

VT 003 286

BAILEY, JAMES H., AND OTHERS

RELATED INFORMATION FOR THE STUDY OF FERROUS
INDUSTRY .

CENTRAL MICHIGAN UNIV., MT. PLEASANT. DEPT.
OF INDUSTRIAL EDUCATION
PUB DATE - 16AUG67 125P.

DESCRIPTORS - *RESOURCE UNITS; *INDUSTRIAL
ARTS; *METALS; HIGH SCHOOLS; INSTRUCTIONAL
FILMS; BIBLIOGRAPHIES

ABSTRACT - THIS RESOURCE UNIT IS FOR TEACHER
USE IN A COURSE TREATING THE FERROUS METAL
INDUSTRY. IT WAS DEVELOPED IN A NATIONAL
DEFENSE EDUCATION ACT INSTITUTE FOR ADVANCED
STUDY IN INDUSTRIAL ARTS BY 25 INDUSTRIAL
ARTS METAL TEACHERS. TEXTUAL MATERIAL IS
PRESENTED FOR THE TOPICS: (1) INTRODUCTION
AND HISTORY, (2) OWNERSHIP AND CONTROL, (3)
SOURCES OF RAW MATERIALS, (4) REFINING
PROCESSES, (5) MANUFACTURING CONSUMER
PRODUCTS, AND (6) SALES AND DISTRIBUTION.
CURRICULAR MATERIALS INCLUDE UNITS ON MASS
PRODUCTION TITLED: (1) INTRODUCTION AND
HISTORY OF AMERICAN INDUSTRY, (2) FINANCIAL
STRUCTURE OF INDUSTRY, (3) TYPICAL STRUCTURE
AND PERSONNEL RESPONSIBILITIES IN AN
INDUSTRIAL CORPORATION AS ADAPTED TO A
CLASSROOM SITUATION, (4) RESEARCH AND
DEVELOPMENT, AND (5) PRODUCTION, PLANNING,
QUALITY CONTROL, AND PRODUCTION FLOW CHART.
SUPPLEMENTARY MATERIALS INCLUDE (1)
ORGANIZATIONAL CHARTS, (2) A UNIT TEST, AND
(3) AN EXTENSIVE BIBLIOGRAPHY OF BOOKS,
FILMS, PERIODICALS AND INSTITUTE RESOURCE
MATERIALS. (EM)

VT 003 553

SALMON, DANIEL A., ED.

DRAFTING EXPERIENCES FOR INTERMEDIATE SCHOOL PUPILS, A RESOURCE BULLETIN FOR TEACHERS OF INDUSTRIAL ARTS. CURRICULUM BULLETIN, 1966-67 SERIES, NO. 9.

NEW YORK CITY BOARD OF EDUCATION, N.Y.
BOARD OF EDUCATION OF THE CITY OF NEW YORK,
PUBLICATIONS SALES OFFICE, 110 LIVINGSTON
STREET, BROOKLYN, NEW YORK 11201 (\$3.00).
PUB DATE - 67 83P.

DESCRIPTORS - *RESOURCE GUIDES; INDUSTRIAL ARTS; *CORRELATION; *INTERMEDIATE GRADES; *DRAFTING; UNITS OF STUDY (SUBJECT FIELDS)

ABSTRACT - DEVELOPED BY A CURRICULUM COORDINATOR, THIS RESOURCE GUIDE WAS LATER TESTED IN COOPERATING JUNIOR HIGH SCHOOLS. THE MATERIALS MAY BE USED IN A ONE-TERM COURSE FOR TEACHING DRAFTING SKILLS, BUT SUGGESTIONS ARE ALSO GIVEN FOR CORRELATING THESE MATERIALS WITH SCIENCE, MATHEMATICS, LANGUAGE ARTS, SOCIAL STUDIES, ART, HEALTH EDUCATION, AND OTHER INDUSTRIAL AREAS. THE AIM, SUGGESTED ACTIVITIES, DISCUSSION TOPICS, TEACHER DEMONSTRATION, AND ASSIGNMENTS AND HOMEWORK ARE OUTLINED FOR EACH OF THE 24 LESSON PLANS. A SECTION DEVOTED TO TEACHER SUGGESTIONS COVERS: (1) RESOURCES AND AIDS, (2) NECESSARY EQUIPMENT AND MATERIALS, (3) VISUAL AIDS, (4) CLASSROOM MANAGEMENT, AND (5) TEACHING TECHNIQUES. (DM)

VT 003 713

STATE ADOPTED TEXTBOOKS FOR INDUSTRIAL ARTS IN INDIANA.

INDIANA STATE BOARD OF EDUCATION,
INDIANAPOLIS
PUB DATE - 66 5P.

DESCRIPTORS - *TEXTBOOKS; *BIBLIOGRAPHIES; *INDUSTRIAL ARTS

ABSTRACT - FIFTY-SIX TEXTBOOKS ADOPTED FOR INDUSTRIAL ARTS COURSES IN ELEMENTARY, JUNIOR HIGH, AND SENIOR HIGH SCHOOLS FOR A 5-YEAR PERIOD BEGINNING JULY 1, 1967 ARE LISTED. THE PUBLICATION DATES RANGE FROM 1957 THROUGH 1966. THEY ARE CATEGORIZED BY COURSES WITHIN GRADE LEVELS. TEXTBOOK TITLE, PUBLICATION DATE, AUTHOR, PUBLISHER, CONTRACT PRICE, AND EXCHANGE PRICE ARE GIVEN. (EM)

VT 003 977

HOVERSON, BURTON R.
JUNIOR HIGH SCHOOL METALS, A CURRICULUM GUIDE.

SAINT PAUL PUBLIC SCHOOLS, MINN.
PUBLICATION-324
PUB DATE - 67 72P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *METALS; JUNIOR HIGH SCHOOLS

ABSTRACT - THIS CURRICULUM GUIDE WAS DEVELOPED BY A COMMITTEE OF TEACHERS FOR USE BY TEACHERS IN 180-HOUR JUNIOR HIGH INDUSTRIAL ARTS METALS PROGRAMS. THE PHILOSOPHY OF INDUSTRIAL ARTS EDUCATION, THE

JUNIOR HIGH SCHOOL STUDENTS, AND FLEXIBLE SCHEDULING ARE DISCUSSED. A BRIEF TOPIC OUTLINE SUGGESTS CONTENT RELATED TO (1) METAL MINING, EXTRACTION, AND PRODUCTION, AND (2) THE SOCIAL EFFECTS OF METALS DEPOSITS AND INDUSTRIES. SAMPLE UNITS PRESENTED ARE (1) PHYSICAL PROPERTIES OF METALS, (2) REFINING IRON ORE, (3) MASS PRODUCTION, AND (4) OCCUPATIONAL INFORMATION. PROJECT PLANS ARE INCLUDED FOR A CROSS PEEN HAMMER, TOOL TRAY, FUNNEL, SMALL PARTS STORAGE RACK, BARBECUE FORK AND SPATULA, DUST PAN, AND COOKIE CUTTERS. THE APPENDICES CONTAIN (1) A SAFETY RULE LIST, (2) A SAFETY EXAMINATION, (3) A GLOSSARY OF INDUSTRIAL TERMS, (4) CROSSWORD PUZZLES, AND (5) BRIEF STORIES OF IRON, ANTIMONY, ALUMINUM, LEAD, NICKEL, ZINC, COPPER, AND PRECIOUS METALS. (EM)

VT 003 978

WOOD AND PLASTIC, A GUIDE FOR GRADES 10-11-12.

SAINT PAUL PUBLIC SCHOOLS, MINN.
PUBLICATION-313
PUB DATE - 66 42P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *WOODWORKING; *PLASTICS; SENIOR HIGH SCHOOLS

ABSTRACT - THIS CURRICULUM GUIDE WAS DEVELOPED BY A COMMITTEE OF TEACHERS FOR USE IN 180-HOUR HIGH SCHOOL INDUSTRIAL ARTS WOOD AND PLASTICS PROGRAMS. THE UNITS ARE (1) LET'S GET ORGANIZED, (2) LET'S GET STARTED, (3) CONSTRUCTING WITH MACHINE TOOLS, (4) UPHOLSTERING, (5) WOODTURNING, (6) PLASTICS--THE NEW MATERIAL FOR THE NEW AGE, (7) MASS PRODUCTION, AND (8) WOOD LAMINATION. EACH UNIT GIVES AN EXPLANATORY INTRODUCTION, OBJECTIVES, A PROJECT LIST, EQUIPMENT AND AIDS, REFERENCES, AND SUGGESTED TEACHING METHODS. THE TEACHER SHOULD BE AN INDUSTRIAL ARTS MAJOR, AND THE STUDENTS SHOULD BE IN GRADES 10 THROUGH 12. PHOTOGRAPHS, CARTOONS, AND DRAWINGS ARE INCLUDED. (EM)

VT 004 343

INDUSTRIAL ARTS METALWORKING, SECONDARY SCHOOLS FIRST YEAR. CURRICULUM BULLETIN, 1966-67 SERIES NO. 7.

NEW YORK CITY BOARD OF EDUCATION, N.Y.
BOARD OF EDUCATION OF THE CITY OF NEW YORK,
PUBLICATIONS SALES OFFICE, 110 LIVINGSTON
STREET, BROOKLYN, NEW YORK 11201 (\$5.00).
PUB DATE - 67 201P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *METALS; SECONDARY SCHOOLS; CLASSROOM TECHNIQUES; *COURSE CONTENT; INSTRUCTIONAL MATERIALS

ABSTRACT - AFTER EXAMINING THE METAL INDUSTRY IN NEW YORK AND INVESTIGATING CURRENT PRACTICES IN INDUSTRIAL ARTS, A CURRICULUM COMMITTEE DEVELOPED THIS GUIDE FOR TEACHER USE IN PLANNING A FIRST-YEAR COURSE IN METALWORKING. SUGGESTIONS ARE GIVEN FOR CLASS ORGANIZATION, STUDENT GUIDANCE, THE PROJECT METHOD OF TEACHING AND TESTING. SEPARATE SECTIONS, EACH OFFERING PROJECT IDEAS, SAMPLE

IND ARTS

13

LESSON PLAN, SAMPLE RELATED LESSON PLAN, SAMPLE TEST, AND LIST OF RELATED MATERIALS, COVER: (1) BENCH METAL, (2) MACHINE METAL, (3) SHEET METAL, (4) ART METAL AND JEWELRY, (5) CAST METAL, AND (6) WROUGHT METAL. THE ACTIVITIES, DEMONSTRATIONS, AND RELATED INFORMATION FOR EACH OF THE SECTIONS ARE LISTED SEPARATELY IN THE CHAPTER ON COURSE CONTENT. DETAILED INFORMATION IS GIVEN FOR CONDUCTING A UNIT ON MASS PRODUCTION. A BIBLIOGRAPHY IS INCLUDED. (DM)

VT 004 592 ED 020 349

BOHN, RALPH C.

NDEA TITLE XI INSTITUTE FOR ADVANCED STUDY IN INDUSTRIAL ARTS (SAN JOSE STATE COLLEGE, JUNE 19-JULY 28, 1967). FINAL TECHNICAL REPORT.

PUB DATE - 67 96P.

DESCRIPTORS - *INSTITUTES (TRAINING PROGRAMS); *INDUSTRIAL ARTS; PROGRAM DESCRIPTIONS; *PROGRAM EVALUATION; PARTICIPANT INVOLVEMENT; CURRICULUM DEVELOPMENT; INSTRUCTIONAL IMPROVEMENT; *MATERIAL DEVELOPMENT; *INSTRUCTIONAL MATERIALS

ABSTRACT - THE INSTITUTE WAS HELD TO IMPROVE INSTRUCTION AND UPDATE CURRICULUM OFFERINGS THROUGH THE DEVELOPMENT OF NEW INSTRUCTIONAL MATERIALS AND PROCEDURES WHEREBY INDUSTRIAL MATERIALS MAY BE INTEGRATED INTO THE LABORATORY ACTIVITIES OF INDUSTRIAL ARTS PROGRAMS. THE 24 PARTICIPANTS WERE TEACHER EDUCATORS, SUPERVISORS, AND TEACHERS FROM 16 STATES. PHASE I WAS DEVOTED TO A TECHNOLOGICAL STUDY OF CHEMICAL, PHYSICAL, AND MECHANICAL PROPERTIES OF INDUSTRIAL MATERIALS. DURING PHASE II THE PARTICIPANTS UTILIZED THE TECHNICAL INSTRUCTION OF PHASE I TO DEVELOP 60 UNITS OF INSTRUCTION BASED ON INDUSTRIAL MATERIALS. THE DEVELOPMENT OF THESE UNITS INVOLVED THE BUILDING AND TESTING OF DEMONSTRATION MODELS FOR USE AS INSTRUCTIONAL MEDIA. A DAY-BY-DAY DESCRIPTION OF THE INSTITUTE PROGRAM, AN EVALUATION REPORT AND DETAILS OF THE ADMINISTRATION OF THE INSTITUTE ARE INCLUDED. (EM)

VT 004 596

HANDBOOK FOR INSTRUCTORS OF INDUSTRIAL ARTS AND VOCATIONAL EDUCATION. TPS-CURRICULUM BULL-6.

TULSA PUBLIC SCHOOLS, OKLA. DIV. OF INSTRUCTION
PUB DATE - 65 68P.

DESCRIPTORS - *TEACHING GUIDES; *PROGRAM GUIDES; *INDUSTRIAL ARTS; *VOCATIONAL EDUCATION; JUNIOR HIGH SCHOOLS; HIGH SCHOOLS; ELEMENTARY SCHOOLS; SCHOOL SHOPS; CURRICULUM; EQUIPMENT

ABSTRACT - THIS GUIDE WAS DEVELOPED BY ADMINISTRATIVE PERSONNEL FOR USE BY TEACHERS IN OPERATING PROGRAMS IN THE TULSA SCHOOL SYSTEM. THE OBJECTIVES, A STATEMENT OF BELIEFS, AND THE PHILOSOPHY OF VOCATIONAL INDUSTRIAL EDUCATION ARE DISCUSSED. A DESCRIPTION OF THE INDUSTRIAL ARTS AND VOCATIONAL EDUCATION PROGRAM COVERS THE

ELEMENTARY THROUGH ADULT LEVELS OF INSTRUCTION, SUGGESTED COURSES, AND COOPERATIVE TRAINING. SPECIFIC DIRECTIONS ARE GIVEN FOR (1) OPENING THE SHOP FOR THE NEW YEAR, (2) MANAGING SHOP FINANCE, (3) ORGANIZING PERSONNEL, (4) INSURING SAFETY, (5) TEACHING, WHICH INCLUDES LESSON PLANNING, METHODS, MATERIALS, CONTENT, RELATED STUDY, PRACTICAL WORK, CURRICULUM GUIDES, AND PROJECTS, (6) ACQUIRING AND USING SUPPLIES, (7) EVALUATING STUDENTS AND SELF, (8) PREPARING FOR A SUBSTITUTE TEACHER, (9) CLOSING THE SHOP AT THE END OF THE YEAR, WHICH INCLUDES MAKING INVENTORIES, STORING EQUIPMENT, REQUISITIONING NEW SUPPLIES AND EQUIPMENT, AND COMPLETING STATE AND SCHOOL REPORTS, AND (10) ATTAINING PROFESSIONAL GROWTH. (BS)

VT 004 636

EXPERIMENTS AND INSTRUCTIONAL UNITS FOR INDUSTRIAL MATERIALS AS AN INTEGRATED PART OF THE INDUSTRIAL ARTS, PREPARED AT NDEA TITLE XI INSTITUTE FOR ADVANCED STUDY IN INDUSTRIAL ARTS (SAN JOSE STATE COLLEGE, CALIFORNIA, JUNE 19-JULY 28, 1967).

PUB DATE - 67 233P.

DESCRIPTORS - *TEACHING GUIDES; *INDUSTRIAL ARTS; UNITS OF STUDY (SUBJECT FIELDS); HIGH SCHOOLS; *LABORATORY EXPERIMENTS

ABSTRACT - THESE UNITS WERE DEVELOPED FOR TEACHER USE IN PRESENTING VARIOUS INDUSTRIAL MATERIALS AND THEIR CHARACTERISTICS TO INDUSTRIAL ARTS STUDENTS. THE 58 UNITS ARE GROUPED BY THE TOPICS: (1) ELECTRICITY, (2) FUELS AND LUBRICANTS, (3) GRAPHIC ARTS, (4) LEATHER, (5) METAL, (6) PLASTICS, AND (7) WOOD. TWO NONCLASSIFIED UNITS ARE "A BEAM DEFLECTION TESTING DEVICE" AND "STRENGTH TESTING APPARATUS." EACH UNIT INCLUDES (1) GRADE LEVEL, (2) OBJECTIVES, (3) MATERIALS AND EQUIPMENT, (4) OUTLINE OF UTILIZATION PROCESS, (5) DEFINITION OF TERMS, (6) REFERENCES, AND (7) AN ILLUSTRATION. ALSO INCLUDED ARE DRAWINGS OF AN ABRASION TESTER FOR PAPER, AN ELASTICITY-PLASTICITY DEMONSTRATION BOARD, AN IMPACT TESTER, A WOOL ABRASION TESTER, AND SAMPLE PREPARATIONS FOR METAL ETCHING AND POWDER METALLURGY. THE DOCUMENT IS LOOSE LEAF AND DITTOED EXCEPT FOR THE ILLUSTRATIONS WHICH ARE LITHOGRAPHED. (EM)

VT 004 684

REFERENCE AND AUDIO-VISUAL MATERIALS ON IRON AND STEEL. A TEACHER'S GUIDE.

AMERICAN IRON AND STEEL INST., NEW YORK, N.Y.
PUB DATE - JUN66 96P.

DESCRIPTORS - *ANNOTATED BIBLIOGRAPHIES; TEACHING GUIDES; *INSTRUCTIONAL FILMS; VOCATIONAL EDUCATION; *INSTRUCTIONAL MATERIALS; ORIENTATION MATERIALS; *REFERENCE MATERIALS; *STEEL INDUSTRY

ABSTRACT - THIS ANNOTATED BIBLIOGRAPHY IS FOR TEACHER USE IN SELECTING RESOURCE MATERIALS FOR UNITS OR COURSES TREATING IRON AND STEEL. OVER 450 PAMPHLETS, BOOKS, CHARTS, FILMS, AND

FILMSTRIPS WHICH ARE AVAILABLE FROM 47 COMPANIES ARE GIVEN UNDER THESE HEADINGS: (1) HISTORY AND DEVELOPMENT, (2) VISITS TO MILLS, (3) REPORTS OF PROGRESS, (4) JOB OPPORTUNITIES, (5) TECHNICAL INFORMATION, (6) PRODUCTS IN USE, AND (7) PRODUCTION. THESE MATERIALS ARE CODED FOR USE IN SEVERAL LEVELS AND AREAS SUCH AS VOCATIONAL EDUCATION, INDUSTRIAL ARTS, ENGINEERING, SCIENCE, MATHEMATICS, SOCIAL STUDIES, ECONOMICS, AND GUIDANCE. INOEXES ARE INCLUDED FOR TITLES AND COMPANY SOURCES. (EM)

VT 004 806

MIKLUS, SAMUEL
TEACHER GUIDE FOR AIRBRUSH.

NEW JERSEY STATE DEPT. OF EDUCATION, TRENTON.
DIV. OF VOCATIONAL EDUCATION
RUTGERS, THE STATE UNIV., NEW BRUNSWICK, N.J.
VOCATIONAL-TECHNICAL CURRICULUM LABORATORY,
RUTGERS UNIVERSITY, 10 SEMINARY PLACE, NEW
BRUNSWICK, NEW JERSEY 08903 (\$1.50).
PUB DATE - MAR67 82P.

DESCRIPTORS - *TEACHING GUIDES; *INDUSTRIAL
ARTS; *ILLUSTRATORS; *AIRBRUSHES; HIGH
SCHOOLS; STUDENT PROJECTS

ABSTRACT - THIS GUIDE WAS PREPARED BY AN
INDIVIDUAL TEACHER AND THE DIVISION OF
VOCATIONAL EDUCATION FOR USE IN TEACHING
AIRBRUSH TECHNIQUES IN ART CLASSES. SECTIONS
ARE (1) OBJECTIVES, (2) GENERAL INFORMATION,
(3) EQUIPMENT AND MATERIALS, (4) PREPARATION
OF PROJECTS, (5) PROCEDURE FOR SETTING UP
EQUIPMENT, (6) THE AIRBRUSH PROCESS, (7)
CLEANING AND MAINTENANCE, (8) ERRORS--CAUSES
AND REMEDIES, (9) NINE ILLUSTRATED RENDERING
PROJECTS, AND (10) PHOTO RETOUCHING. THE
PROJECTS WERE DESIGNED TO PROVIDE PRACTICE
WITH EVEN TONES AND WITH GRADUATED TONES ON
PYRAMIDS, CYLINDERS, SPHERES, CUBES, AND TWO-
MATERIAL FLANGED CYLINDERS. LISTS OF AIRBRUSH
MANUFACTURERS AND SOURCES OF EQUIPMENT AND
SUPPLIES ARE INCLUDED. (EM)

VT 004 851

GENERAL INDUSTRIAL ARTS (MANUFACTURING) , A
COURSE OF STUDY FOR GRADES 7, 8, OR 9.

GEORGIA STATE DEPT. OF EDUCATION, ATLANTA.
INDUSTRIAL ARTS EDUCATION
PUB DATE - 67 266P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; *MANUFACTURING; GRADE 7; GRADE 8; GRADE
9; LESSON PLANS

ABSTRACT - A REVISION OF THE 1960 EDITION,
THIS CURRICULUM GUIDE WAS DEVELOPED BY
GRADUATE STUDENTS AND A TEACHER-EDUCATOR FOR
USE BY TEACHERS IN PLANNING A FLEXIBLE 1-YEAR
COURSE IN MANUFACTURING FOR GRADES SEVEN,
EIGHT, OR NINE. THE INTRODUCTION GIVES THE
UNDERLYING PHILOSOPHY, COURSE OBJECTIVES, AND
AN ORGANIZATION CHART. THE 37 LESSON PLANS
COVER (1) GENERAL PROCEDURES DEALING WITH
PLANNING, SELECTING MATERIALS, ASSEMBLING,
FINISHING, CARING FOR EQUIPMENT, SELECTING
AND USING INDUSTRIAL PRODUCTS AND CONSIDERING
INDUSTRIAL ARTS TEACHING AS A CAREER, AND (2)
IFIC LESSONS DEALING WITH DRAFTING,

WOODS, METALS, ELECTRICITY, GRAPHIC ARTS,
POWER, AND INDUSTRY. MOST LESSON PLANS
INCLUDE OBJECTIVES, TIME REQUIRED,
INSTRUCTIONAL AIDS, INTRODUCTION, SUBJECT
MATTER OUTLINE, SUMMARY QUESTIONS, AN
ASSIGNMENT, AND METHODS OF TESTING, AND
REFERENCES. THE TIME REQUIRED FOR EACH LESSON
RANGES FROM ONE TO 10 PERIODS. SUGGESTED
STUDENT ACTIVITIES AND SAMPLE JOB ASSIGNMENT
AND INFORMATIONAL ASSIGNMENT SHEETS FOR
WRITTEN EXERCISES ARE INCLUDED. (EM)

VT 005 128

SAITO, THOMAS, AND OTHERS
REVISED APPROVED BOOK LIST, INDUSTRIAL ARTS,
GRADES K-12 .

HAWAII STATE DEPT. OF EDUCATION, HONOLULU.
VOCATIONAL, POST-HIGH AND ADULT EDUCATION
BRANCH
PUB DATE - NOV67 62P.

DESCRIPTORS - *BIBLIOGRAPHIES; *INDUSTRIAL
ARTS; ELEMENTARY GRADES; HIGH SCHOOLS;
*TEXTBOOKS; *REFERENCE
MATERIALS; *PERIODICALS

ABSTRACT - THIS BOOKLIST, DEVELOPED TO
COMPLEMENT THE "REVISED INDUSTRIAL ARTS
GUIDE, K-12" AND COMPILED ON THE BASIS OF A
REVIEW AND EVALUATION BY MEMBERS OF THE
APPROVED BOOK LIST COMMITTEE, INCLUDES
PERIODICALS, BASAL OR STANDARD TEXTBOOKS,
SUPPLEMENTARY TEXTBOOKS, ENRICHMENT BOOKS,
AND PROFESSIONAL OR TECHNICAL BOOKS
CLASSIFIED ON THREE LEVELS ACCORDING TO
GRADES. ITEMS IN LEVEL III, GRADES 9-12, ARE
CLASSIFIED UNDER DRAFTING AND DESIGN,
ELECTRICITY AND ELECTRONICS, GENERAL
INDUSTRIAL ARTS, GRAPHIC ARTS, METALS,
PLASTICS, POWER AND TRANSPORTATION, RESEARCH,
AND DEVELOPMENT AND WOODS. PROFESSIONAL BOOKS
RECOMMENDED FOR ALL INDUSTRIAL ARTS
DEPARTMENTS AND PERIODICALS RECOMMENDED FOR
ALL INDUSTRIAL ARTS TEACHERS AND STUDENTS ARE
LISTED SEPARATELY. OF 451 CITATIONS, SOME OF
WHICH CONTAIN MULTIPLE ITEMS, MOST WERE
PUBLISHED AFTER 1950. THE AUTHOR, TITLE,
PUBLISHER, DATE, GENERAL READING LEVEL, AND
PRICE ARE INDICATED FOR THE BOOKS, AND THE
PUBLISHER'S ADDRESS FOR PERIODICALS. THE
APPENDIX CONTAINS FORMS FOR USE IN NOMINATING
AND EVALUATING ADDITIONAL MATERIALS FOR THIS
BOOK LIST. (EM)

VT 005 164

HAY, EARL
EARLY SECONDARY INDUSTRIAL ARTS . AN
INSTRUCTIONAL GUIDE.

NEW YORK STATE EDUCATION DEPT., ALBANY.
BUREAU OF SECONDARY CURRICULUM DEVELOPMENT
PUB DATE - 67 152P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; *JUNIOR HIGH SCHOOLS

ABSTRACT - DESIGNED FOR TEACHER USE, THE
GUIDE DEVELOPS AND ESTABLISHES MINIMUM
INSTRUCTIONAL CONTENT FOR TWO SEMESTERS OF
INDUSTRIAL ARTS IN THE EARLY SECONDARY
GRADES. IT WAS DEVELOPED AT A STATE
CURRICULUM WORKSHOP BY COMMITTEES OF

EXPERIENCED TEACHERS AND STATE EDUCATION DEPARTMENT PERSONNEL. THE MATERIAL, DESIGNED TO MEET NATIONAL EDUCATIONAL OBJECTIVES, WAS PRESENTED TO INDUSTRIAL ARTS LEADERS AT AN ANNUAL STATE CONFERENCE FOR EVALUATION AND CRITICISM, AND THEIR RECOMMENDATIONS WERE CONSIDERED IN THE PREPARATION OF THE FINAL MANUSCRIPT BY THE SUPERVISOR OF VOCATIONAL CURRICULUM. THE PROGRAM ORGANIZATION IS BASED ON 25 PERCENT ORGANIZED GROUP INSTRUCTION, 75 PERCENT PERSONALIZED INSTRUCTION AND MANIPULATIVE EXPERIENCE, 80 PERCENT OF GROUP INSTRUCTION TIME DEVOTED TO LESSON CONTENT, AND TEACHER ADDITION OF LESSONS AND CONTENT TO ENRICH AND EXPAND ALL AREAS. THE CONTENT DISTRIBUTION FOR THE FIRST SEMESTER IS (1) WOODS, 40 PERCENT, (22 LESSONS), (2) CERAMICS, 22.5 PERCENT, (15 LESSONS), (3) PLASTICS, 22.5 PERCENT, (11 LESSONS), AND (4) DRAFTING, 15 PERCENT, (10 LESSONS). CONTENT DISTRIBUTION FOR THE SECOND SEMESTER IS (1) METALS, 30 PERCENT, (16 LESSONS), (2) ELECTRICITY, 25 PERCENT, (15 LESSONS), (3) GRAPHIC ARTS, 20 PERCENT, (13 LESSONS), AND (4) POWER MECHANICS, 25 PERCENT, (14 LESSONS). EACH LESSON INCLUDES THE DESIRED STUDENT UNDERSTANDING, A DESCRIPTION, AND SUGGESTED APPLICATIONS. SUPPLEMENTARY MATERIALS INCLUDE (1) INFORMATION ON A LINE PRODUCTION UNIT, COMMUNITY RESOURCES, INSTRUCTIONAL MEDIA, AND BASIC INDUSTRIAL ARTS CURRICULUM PATTERNS, AND (2) EXAMPLES OF SEMESTER SCHEDULES AND A WEEKLY PLANBOOK PAGE. (EM)

VT 005 279

THE PRE-TECHNICAL PROJECT, A DEMONSTRATION IN EDUCATION FOR TECHNOLOGY, ENGINEERING TECHNOLOGY, 11TH AND 12TH YEAR.

NEW YORK CITY BOARD OF EDUCATION, BROOKLYN, N.Y. BUREAU OF CURRICULUM DEVELOPMENT CORRELATED AND PRE-TECHNICAL PROGRAMS, 480 PACIFIC STREET, BROOKLYN, NEW YORK 11217 (SINGLE COPIES TO SCHOOLS SYSTEMS WITHOUT CHARGE).

PUB DATE - SEP 67 256P.

DESCRIPTORS - PROGRAM GUIDES; *CURRICULUM GUIDES; INDUSTRIAL ARTS; *TEACHING GUIDES; *ENGINEERING; GRADE 11; GRADE 12; EXPERIMENTAL CURRICULUM; *PRETECHNOLOGY PROGRAMS; UNDERACHIEVERS; TEACHING METHODS; PROGRAM DEVELOPMENT IDENTIFIERS - ENGINEERING TECHNOLOGY

ABSTRACT - THIS CURRICULUM GUIDE WAS DEVELOPED BY A COMMITTEE OF TEACHERS, AND REVISED AFTER CLASSROOM USE FOR USE IN COMPREHENSIVE HIGH SCHOOLS WITH 11TH AND 12TH GRADE STUDENTS WHO ARE PLANNING POST-SECONDARY EDUCATION IN ENGINEERING TECHNOLOGY. THE PROGRAM EMPHASIZES A TEAM TEACHING APPROACH TO INTERDISCIPLINARY CORRELATION OF SUBJECT MATTER AND A LABORATORY ORIENTATION OF THE CURRICULUM. IT WAS CONCEIVED AS A SYSTEM OF REMOTIVATION FOR UNDERACHIEVING STUDENTS. SUGGESTED UNITS FOR THE GRADE 11 ARE (1) MEASUREMENTS, (2) COMPOSITION AND RESOLUTION OF FORCES, (3) WORK, ENERGY, AND POWER, (4) SIMPLE MACHINES, (5) TRANSFORMATION OF ENERGY, (6) HEAT, (7) MECHANICS OF FLUIDS, (8) LIGHT, (9) SOUND, AND (10) MOTION. SUGGESTED UNITS FOR GRADE 12

ARE (1) MAGNETISM AND STATIC ELECTRICITY, (2) CURRENT ELECTRICITY, (3) ELECTRONICS, (4) ELECTROCHEMISTRY, AND (5) NUCLEAR ENERGY. EACH UNIT GIVES SUGGESTED OBJECTIVES, TOPICS, AND ACTIVITIES. STUDENT SELECTION SHOULD BE ON THE BASIS OF UNFULFILLED ACADEMIC POTENTIAL AND MARGINAL ACHIEVEMENT AT THE END OF GRADE 10. THE SUGGESTED TIME ALLOTMENT IS 16.5 CLOCK HOURS PER WEEK. SUPPLEMENTARY MATERIALS INCLUDE (1) INFORMATION ON GENERAL METHODOLOGY AND SPECIFIC TEACHING METHODS FOR SCIENCE, INDUSTRIAL ARTS LABORATORY, ENGINEERING ENGLISH, AND ENGINEERING MATHEMATICS, (2) EXAMPLES OF ADMINISTRATIVE AIDS, AND (3) LINE DRAWING ILLUSTRATIONS. OTHER DOCUMENTS IN THE SERIES CONCERN MEDICAL TECHNOLOGY (VT 005 278) AND BUSINESS TECHNOLOGY FOR GRADE 11 (VT 005 280) AND GRADE 12 (VT 005 281). FOR VT 005 278 SEE ED 019 496, OCTOBER 68 RIE. (EM)

VT 005 593

INTRODUCTION TO THE TECHNICAL CORES I AND II.

SANTANA VOCATIONAL TECHNICAL CENTER, CALIF. PUB DATE - 67 23P.

DESCRIPTORS - *INDUSTRIAL EDUCATION; HIGH SCHOOLS; COURSE OBJECTIVES; OCCUPATIONAL GUIDANCE; *COURSE DESCRIPTIONS; PROGRAM DESCRIPTIONS; CURRICULUM; LABORATORIES; *DISCOVERY LEARNING; *EDUCATIONAL FACILITIES; RESOURCE CENTERS

ABSTRACT - TECHNICAL CORE I, A 9TH GRADE COURSE, INVOLVES A PROBLEM-SOLVING APPROACH IN AN INDUSTRIAL LABORATORY SETTING WHERE ONLY THE PROBLEMS, RESOURCES, AND GUIDANCE ARE PROVIDED. NO DIRECT ANSWERS ARE GIVEN BY THE TEACHER. THE PROBLEMS COVER AND REINFORCE BASIC SCIENTIFIC PRINCIPLES AND INVOLVE SEVERAL MATERIALS AND PROCESSES. TECHNICAL CORE II, A 10TH GRADE COURSE, INVOLVES 24 WEEKS OF BASIC EXPERIENCES WITH SCIENTIFIC PRINCIPLES AND TECHNICAL PROCESSES, 4 WEEKS OF WORK ON A SPECIFIC INDUSTRIAL PROBLEM, AND 8 WEEKS OF WORK ON A SECOND MORE INDIVIDUALIZED PROBLEM. COURSES FOR GRADES 11 AND 12 ARE OF A VOCATIONAL OR TECHNICAL NATURE AND UPON COMPLETION OF THE FACILITIES WILL INCLUDE: (1) ELECTRO-MECHANICAL TECHNOLOGY, (2) PLASTICS AND SYNTHETIC TECHNOLOGY, (3) INDUSTRIAL DRAWING AND DESIGN, (4) INSTRUMENTATION, (5) POWER MECHANICS, (6) ELECTRONIC ASSEMBLY TECHNOLOGY, (7) ELECTRONIC TECHNOLOGY, (8) AUTO BODY RECONDITIONING, (9) BUILDING CONSTRUCTION TECHNOLOGY, AND (10) VOCATIONAL AUTO SHOP. DURING THE 4-YEAR PROGRAM STUDENTS HAVE ACCESS TO AN INDIVIDUALIZED OCCUPATIONAL GUIDANCE PROGRAM INVOLVING TESTING AND EDUCATIONAL ACTIVITIES. STUDENT COMPETENCIES ARE LISTED FOR ALL COURSES WHICH ARE DESCRIBED. (EM)

VT 005 595 ED 020 429

DEVORE, PAUL W. STRUCTURE AND CONTENT FOUNDATIONS FOR CURRICULUM DEVELOPMENT.

AMERICAN INDUSTRIAL ARTS ASSOCIATION, WASHINGTON, D.C.

AMERICAN INDUSTRIAL ARTS ASSOCIATION,
NATIONAL EDUCATION ASSOCIATION, 1201
SIXTEENTH STREET, N.W., WASHINGTON, D.C.
20036 (\$0.90).
PUB DATE - 66 24P.

DESCRIPTORS - *INDUSTRIAL ARTS; *TECHNOLOGY;
*TAXONOMY; *CURRICULUM DEVELOPMENT;
*CURRICULUM DESIGN; GENERAL EDUCATION; SOCIAL
FACTORS; CULTURAL FACTORS

ABSTRACT - IT IS PROPOSED THAT AN INDUSTRIAL ARTS CURRICULUM BE BASED ON THE CONCEPT OF MAN AS A CREATOR OF TECHNOLOGY. TECHNOLOGY IS A MAJOR AMERICAN SOCIETAL BASE INVOLVING PRACTICALLY ALL CITIZENS AND SHOULD BE ESTABLISHED AS A DISCIPLINE TO ELIMINATE CONFUSION AND LACK OF DIRECTION IN THE CURRICULUM. A MACROTECHNOLOGICAL ANALYSIS IDENTIFYING A UNIVERSE OF CONTENT WHICH IS IN KEEPING WITH THE PRINCIPLES OF DISCIPLINE STRUCTURES AND GENERAL EDUCATION IS OFFERED AS A MEANS OF DEFINING A TAXONOMY TO SERVE CURRICULUM PLANNING. A TAXONOMY OF TECHNOLOGY CONSISTS OF BOTH TECHNICAL AND CULTURAL-SOCIAL ELEMENTS WITH THE MAJOR TECHNICAL AREAS BEING PRODUCTION, COMMUNICATION, AND TRANSPORTATION WHICH MEET TAXONOMETRIC SELECTION CRITERIA INCLUDING THAT OF UNIVERSALISM. ILLUSTRATIVE EXAMPLES INDICATE 10 LEVELS OF SPECIFICITY IN THE PROPOSED TAXONOMY. MAJOR STEPS IN CURRICULUM DEVELOPMENT, UTILIZING THE TAXONOMY AS A CONTEXT RESERVOIR, ARE TO ESTABLISH THE TAXONOMY, THE BASIC CONCEPTS AND PRINCIPLES, UNITS OF CONTENT INSTRUCTION BASED ON ANALYSES OF CONCEPTS AND PRINCIPLES, AND COURSES OF STUDY BY GROUPING LOGICAL COMBINATIONS OF INSTRUCTIONAL UNITS. SOME ADVANTAGES OF THIS APPROACH ARE THAT (1) CONTENT SELECTION CRITERIA ARE PROVIDED, (2) FLEXIBILITY, ADAPTABILITY, AND INTERNAL CONSISTENCY ARE INTRINSIC, (3) PROGRAMS RATHER THAN ISOLATED COURSES ARE POSSIBLE, (4) TEACHER COMPETENCY CAN BE INCREASED THROUGH SPECIALIZATION, AND (5) A BASE IS PROVIDED FOR LIFETIME STUDY AND PROFESSIONAL CONTRIBUTION BY TEACHERS. IT IS RECOMMENDED THAT THE PROFESSION, THROUGH THE AMERICAN INDUSTRIAL ARTS ASSOCIATION, ESTABLISH A PERMANENT COMMITTEE FOR DERIVING A TAXONOMETRIC STRUCTURE FOR THE INDUSTRIAL ARTS. THIS DOCUMENT IS AVAILABLE FOR 90 CENTS FROM AMERICAN INDUSTRIAL ARTS ASSOCIATION, NATIONAL EDUCATION ASSOCIATION, 1201 SIXTEENTH STREET, N.W., WASHINGTON, D.C. 20036. (EM)

VT 005 650
STATE CURRICULUM GUIDE FOR INDUSTRIAL ARTS
AND VOCATIONAL ELECTRICITY-ELECTRONICS .

VIRGINIA STATE DEPT. OF EDUCATION, RICHMOND.
INDUSTRIAL EDUCATION SERVICE
PUB DATE - NOV67 60P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; *TRADE AND INDUSTRIAL EDUCATION;
*ELECTRICIANS; *ELECTRICITY; *ELECTRONICS;
*HIGH SCHOOLS

ABSTRACT - THIS CURRICULUM GUIDE WAS
DEVELOPED BY TEACHERS AND SUPERVISORS FOR
TEACHER USE IN COURSE PLANNING FOR HIGH

SCHOOL INDUSTRIAL ARTS AND VOCATIONAL COURSES
IN ELECTRICITY AND ELECTRONICS. TOPICAL
COURSE OUTLINES ARE: (1) EXPLORATORY
ELECTRICITY-ELECTRONICS, 45-90 HOURS, (2)
FUNDAMENTAL ELECTRICITY-ELECTRONICS, 180
HOURS, (3) VOCATIONAL BASIC ELECTRICITY-
ELECTRONICS, 360 HOURS, (4) RELATED
MATHEMATICS, 180 HOURS, (5) VOCATIONAL
APPLIED ELECTRONICS, 360 HOURS, AND (6)
RELATED SCIENCE, 180 HOURS, (7) VOCATIONAL
INDUSTRIAL ELECTRICITY, 360 HOURS.
SUPPLEMENTARY MATERIALS INCLUDE A SAMPLE
INSTRUCTION UNIT, FACILITY STANDARDS AND
SUGGESTED FLOOR PLANS, AN EQUIPMENT AND TOOL
LIST, DEFINITIONS OF TYPICAL JOB TITLES, AND
A GLOSSARY OF RELATED EDUCATIONAL TERMS. (EM)

VT 005 914
INSTRUCTOR'S GUIDE FOR PRINTING 1 AND 2.
CURRICULUM BULLETIN NO. 11.

TULSA PUBLIC SCHOOLS, OKLA. DIV. OF
INSTRUCTION
TULSA PUBLIC SCHOOLS, P.O. BOX 45208, TULSA,
OKLAHOMA 74145 (\$1.50).
PUB DATE - 63 119P.

DESCRIPTORS - *TEACHING GUIDES; *CURRICULUM
GUIDES; *INDUSTRIAL EDUCATION; *GRAPHIC ARTS;
*PRINTING; SECONDARY GRADES

ABSTRACT - PREPARED BY A TEACHER COMMITTEE
AND CLASSROOM TESTED FOR TWO YEARS PRIOR TO
PUBLICATION, THIS GUIDE IS FOR USE BY HIGH
SCHOOL INDUSTRIAL ARTS OR VOCATIONAL
INDUSTRIAL EDUCATION TEACHERS IN PLANNING AND
IMPLEMENTING LESSONS IN PRINTING AND
LITHOGRAPHY. THE CONTENT IS DIVIDED INTO SIX
SECTIONS, THE FIRST FOUR OF WHICH DEAL WITH
THE MORE THEORETICAL ASPECTS OF THE SUBJECT
MATTER, AND THE LAST TWO, WITH PRACTICAL
APPLICATIONS. MAJOR AREAS COVERED ARE: (1)
THE PLACE OF PRINTING IN THE HIGH SCHOOL
CURRICULUM, DEALING WITH OBJECTIVES AND
OVERALL VALUE OF GRAPHIC ARTS, (2)
ORGANIZATION TO ATTAIN OBJECTIVES, CONCERNED
WITH SELECTION AND ORGANIZATION OF PROJECTS
AND JOBS, (3) TEACHING PRINTING CLASSES IN
SENIOR HIGH SCHOOL, COVERING SAFETY, JOB
RELATIONS, AND PROBLEM HANDLING, AND (4)
COURSE OUTLINE FOR PRINTING I AND II,
INCLUDING SKILLS AND PROCESSES TO BE
DEVELOPED AND UNDERSTOOD, RELATED AND
TECHNICAL INFORMATION, SUGGESTED METHODS OF
PRESENTATION, AND METHODS OF EVALUATION.
OTHER SECTIONS INCLUDE SUGGESTED JOBS AND
PROJECTS TO BE DONE, INFORMATION SHEETS FOR
STUDENTS, AND TEXTS. RECOMMENDED COURSE
LENGTH IS 180-360 HOURS AS A HIGH SCHOOL
INDUSTRIAL ARTS PROGRAM, AND 540-1,080 HOURS
IF TAUGHT IN A VOCATIONAL SCHOOL. THE
INSTRUCTOR SHOULD HAVE CERTIFICATION IN THE
SUBJECT AREA AND JOB EXPERIENCE. (AW)

VT 005 915
INSTRUCTOR'S GUIDE FOR SENIOR HIGH SCHOOL
WOODWORK IN THE TULSA PUBLIC SCHOOLS
(TENTATIVE). CURRICULUM BULLETIN NO. 12.

TULSA PUBLIC SCHOOLS, OKLA. DIV. OF
INSTRUCTION
TULSA PUBLIC SCHOOLS, P.O. BOX 45208, TULSA,
OKLAHOMA 74145 (\$1.50).

IND ARTS

17

PUB DATE - 67 135P.

DESCRIPTORS - *TEACHING GUIDES; *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *WOODWORKING; *LESSON PLANS; SENIOR HIGH SCHOOLS; SECONDARY GRADES

ABSTRACT - PREPARED BY A COMMITTEE OF SENIOR HIGH SCHOOL WOODWORKING TEACHERS, THIS GUIDE IS FOR USE BY INDUSTRIAL ARTS INSTRUCTORS IN PLANNING HIGH SCHOOL LEVEL COURSES AND LESSONS IN WOODWORKING. IT IS DESIGNED TO SERVE AS RESOURCE MATERIAL IN DEVELOPING A PROGRAM OF WOODWORKING AS WELL AS TO ASSIST THE TEACHER IN PREPARING AND PRESENTING DAILY WORK. CONTENTS INCLUDE: (1) GENERAL INFORMATION ON THE PLACE OF INDUSTRIAL ARTS, AND SPECIFICALLY WOODWORKING, IN THE SENIOR HIGH SCHOOL, (2) GENERAL PRINCIPLES OF PERSONNEL ORGANIZATION AND MANAGEMENT IN THE SHOP, (3) A UNIT PROVIDING TEACHING SUGGESTIONS, PRACTICAL WORK SUGGESTIONS, PROCEDURES, RELATED STUDIES, INSTRUCTOR'S GUIDE SHEETS, SAFETY HINTS, AND A BIBLIOGRAPHY, (4) TWO SECTIONS, "WOODWORK I AND II" AND "WOODWORK III AND IV," WHICH GIVE SPECIFIC TEACHING OUTLINES INCLUDING CLASSROOM PROCEDURES, PROJECT PLANNING, SKILLS AND PROCESSES TO BE DEVELOPED, TECHNICAL INFORMATION AND TEACHING AIDS, AND SUGGESTED PROJECTS, (5) A SECTION CONTAINING SAMPLE LESSON PLANS, AND (6) A SECTION ON STUDENT EVALUATION, INCLUDING A LIST OF SUGGESTED TESTS. A CERTIFIED WOODWORKING TEACHER SHOULD CONDUCT THE 180-360 HOUR COURSE. STUDENTS SHOULD HAVE AN INTEREST AND APTITUDE IN WOODWORKING. ADDITIONAL TEXTS AND REFERENCES SHOULD BE USED IN PRESENTING THE MATERIAL. (AW)

VT 005 963
PLASTIC PROJECTS. FIRST SEMESTER, INDUSTRIAL ARTS.

DENVER PUBLIC SCHOOLS, COLO.
DENVER PUBLIC SCHOOLS, 414 FOURTEENTH STREET,
DENVER, COLORADO 80202 (\$1.50).
PUB DATE - 64 78P.

DESCRIPTORS - *INDUSTRIAL ARTS; *PLASTICS;
*STUDENT PROJECTS; INSTRUCTIONAL AIDS;
TEACHING PROCEDURES; *INSTRUCTIONAL MATERIALS

ABSTRACT - DEVELOPED BY AN INDUSTRIAL ARTS CRAFTS COMMITTEE OF PUBLIC SCHOOL TEACHERS, THIS PROJECT BOOK IS FOR STUDENT USE IN CONSTRUCTING MORE THAN 35 PROJECTS IN A FIRST SEMESTER PLASTICS COURSE. THE WORK PLANS FOR EACH OF THE ILLUSTRATED PROJECTS INCLUDE A DESCRIPTION OF PROCESSES, SUGGESTED MATERIALS, AND RECOMMENDED TOOLS AND EQUIPMENT. A RELATED DOCUMENT IS AVAILABLE AS VT 005 964 (ALSO IN THIS ISSUE). (GR)

VT 005 964
INTERMEDIATE PLASTIC PROJECTS, INDUSTRIAL ARTS.

DENVER PUBLIC SCHOOLS, COLO. DEPT. OF GENERAL CURRICULUM SERVICES.
DENVER PUBLIC SCHOOLS, 414 FOURTEENTH STREET,
DENVER, COLORADO 80202 (\$1.00).
PUB DATE - 65 51P.

DESCRIPTORS - *INDUSTRIAL ARTS; *PLASTICS;
*STUDENT PROJECTS; INSTRUCTIONAL AIDS;
TEACHING PROCEDURES; *INSTRUCTIONAL MATERIALS

ABSTRACT - DEVELOPED BY AN INDUSTRIAL ARTS CRAFTS COMMITTEE OF PUBLIC SCHOOL TEACHERS, THIS INTERMEDIATE PLASTIC PROJECTS BOOK FOR STUDENT USE PROVIDES WORK PLANS FOR CONSTRUCTING 20 PLASTICS PROJECTS. CONTENTS INCLUDE A DESCRIPTION OF PROCESSES, SUGGESTED MATERIALS, RECOMMENDED TOOLS AND EQUIPMENT, AND STUDY REFERENCES FOR EACH OF THE ILLUSTRATED PROJECTS. A RELATED DOCUMENT IS AVAILABLE AS VT 005 963 (ALSO IN THIS ISSUE). (GR)

VT 006 155 ED 041 099
LARSEN, DELMAR L.; NELSON, HERBERT L.
ELEMENTARY SCHOOL INDUSTRIAL ARTS--SELECTED READINGS AND RESOURCES.

EASTERN MICHIGAN UNIV., YPSILANTI. DEPT. OF INDUSTRIAL EDUCATION.
PUB DATE - 68 197P.

DESCRIPTORS - *TEXTBOOKS; *INDUSTRIAL ARTS;
ELEMENTARY GRADES; *TEACHER EDUCATION;
BIBLIOGRAPHIES; *RESOURCE MATERIALS

ABSTRACT - IN AN ATTEMPT TO DRAW TOGETHER SIGNIFICANT MATERIALS ON ELEMENTARY SCHOOL INDUSTRIAL ARTS, 26 JOURNAL ARTICLES, ADDRESSES, CHAPTERS OF BOOKS AND INSTRUCTIONAL MATERIALS, DATED FROM 1923 TO 1967, ARE REPRINTED IN SECTION I "PHILOSOPHY, OBJECTIVES, CURRICULUM, AND METHODOLOGY" AND SECTION II "IMPLEMENTATION OF INDUSTRIAL ARTS IN ELEMENTARY SCHOOL." SECTION III "SELECTED RESOURCES FOR ELEMENTARY SCHOOL INDUSTRIAL ARTS" INCLUDES RESOURCES DESCRIBING EDUCATIONAL EXHIBITS, CONSTRUCTION, AND TEACHING UNITS. ADDITIONAL REFERENCES ARE LISTED COVERING CURRICULUM, UNITS OF INSTRUCTION, ACTIVITIES, AND MATERIALS. (DM)

VT 006 235
BASIC AUTOMOBILE MECHANICS, CENTRAL HIGH SCHOOL, GRADES 9 AND 10. CURRICULUM BULLETIN NUMBER 256.

CINCINNATI PUBLIC SCHOOLS
CINCINNATI PUBLIC SCHOOLS, 230 EAST NINTH STREET, CINCINNATI, OHIO 45202 (\$2.50).
PUB DATE - 62 120P.

DESCRIPTORS - *AUTO MECHANICS; *AUTO MECHANICS (OCCUPATION); *INDUSTRIAL ARTS;
*TRADE AND INDUSTRIAL EDUCATION;
*TEACHING GUIDES; GRADE 9; GRADE 10;
CURRICULUM GUIDES; TRANSPARENCIES

ABSTRACT - DEVELOPED BY TEACHERS AND SUPERVISORS FOR USE WITH HIGH SCHOOL STUDENTS IN VOCATIONAL CLASSES, THIS CURRICULUM BULLETIN MAY BE USED IN A FULL-YEAR COURSE MEETING 2 HOURS PER DAY IN BASIC AUTOMOBILE MECHANICS. THE CONTENTS INCLUDE AN INTRODUCTORY SECTION AND UNITS CONCERNING: (1) ORIENTATION, (2) ENGINE CONSTRUCTION AND COMPONENT PARTS, (3) LUBRICATION, (4) ENGINE COOLING SYSTEMS, (5) THE FUEL SYSTEM AND AUTOMOTIVE ENGINE FUELS, (6) IGNITION

SYSTEMS, (7) THE ELECTRICAL SYSTEM, AND (8) THE POWER TRAIN. EACH UNIT CONTAINS OBJECTIVES, CONTENT, VOCABULARY, SUGGESTED TEACHER ACTIVITIES, SUGGESTED PUPIL ACTIVITIES, EVALUATION, AUDIO-VISUAL AIDS, AND A BIBLIOGRAPHY. THE APPENDIX CONTAINS DEFINITIONS OF BASIC AUTO MECHANICS TERMINOLOGY, SAMPLE JOB SHEETS, A CLASS PROGRESS CHART, ELECTRICAL SYMBOLS, A LIST OF RELATED AND SHOP JOB ACTIVITIES, AND CHARTS AND DIAGRAMS OF AUTOMOBILE PARTS AND ASSEMBLIES. THE CHARTS AND DIAGRAMS ARE SUITABLE FOR REPRODUCTION AS OVERHEAD TRANSPARENCIES. (DM)

VT 006 236
DRAFTING STANDARDS MANUAL . CURRICULUM BULLETIN 290.

CINCINNATI PUBLIC SCHOOLS, OHIO
CINCINNATI PUBLIC SCHOOLS, 230 EAST NINTH STREET, CINCINNATI, OHIO 45202 (\$2.00).
PUB DATE - 67 60P.

DESCRIPTORS - *MANUALS; *TRADE AND INDUSTRIAL EDUCATION; *INDUSTRIAL ARTS; DRAFTSMEN; *DRAFTING; *STANDARDS; HIGH SCHOOLS

ABSTRACT - THIS MANUAL IS FOR TEACHER OR STUDENT USE IN HIGH SCHOOL DRAFTING COURSES. IT WAS DEVELOPED BY VOCATIONAL TEACHERS AND SUPERVISORS TO PROVIDE AN ABRIDGED SET OF STANDARDS FOR HIGH SCHOOL DRAFTING COURSES. STANDARDS ARE ORGANIZED AS FOLLOWS: (1) DRAWING MATERIALS, (2) REPRODUCTION MATERIALS, (3) DRAWING SIZES, (4) DRAWING FORMAT, (5) TYPES OF DRAWING, (6) QUALITY OF DRAWINGS, (7) VIEWS AND SECTIONS, (8) DIMENSIONING, (9) TOLERANCE, AND (10) SURFACE FINISH. THE MATERIAL IS TO BE USED AS AN AID IN STANDARDIZING THE DRAWINGS AND PRACTICES OF STUDENT DRAFTSMEN. THE DOCUMENT IS PRINTED AND PROFUSELY ILLUSTRATED WITH LINE DRAWINGS AND PHOTOGRAPHS. SUPPLEMENTARY MATERIALS INCLUDE CHARTS GIVING DECIMAL EQUIVALENTS, NUMBER AND LETTER DRILL SIZES, AND MILLIMETER TO INCH CONVERSIONS. (EM)

VT 006 244
INDUSTRIAL ARTS CURRICULUM GUIDE FOR INDUSTRIAL CRAFTS IN OHIO SCHOOLS.

OHIO STATE DEPT. OF EDUCATION, COLUMBUS
OHIO INDUSTRIAL ARTS ASSOCIATION, COLUMBUS
PUB DATE - NOV66 73P.

DESCRIPTORS - *STATE CURRICULUM GUIDES; *RESOURCE MATERIALS; *INDUSTRIAL ARTS; *HANDICRAFTS; SECONDARY GRADES; EDUCATIONAL EQUIPMENT; EQUIPMENT MANUFACTURERS; AUDIOVISUAL AIDS

ABSTRACT - THIS CURRICULUM GUIDE WAS DEVELOPED BY TEACHERS, TEACHER EDUCATORS, AND SUPERVISORS FOR USE BY APPROPRIATE PERSONNEL IN INDUSTRIAL ARTS CRAFTS PROGRAMS AT THE JUNIOR OR SENIOR HIGH SCHOOL LEVEL. EACH COURSE OUTLINE FOR JEWELRY, CERAMICS, LEATHER, AND PLASTICS INCLUDES: (1) DISCUSSION TOPICS, (2) REFERENCES, (3) TEACHING AIDS, (4) DEMONSTRATIONS OR EXPERIMENTS, (5) PROJECT ACTIVITIES, AND (6) EQUIPMENT AND SUPPLY LIST. (EM)

VT 006 246
INDUSTRIAL ARTS CURRICULUM GUIDE FOR DRAFTING .

OHIO STATE DEPT. OF EDUCATION, COLUMBUS
THE OHIO INDUSTRIAL ARTS ASSOCIATION, COLUMBUS
PUB DATE - JUN67 40P.

DESCRIPTORS - *STATE CURRICULUM GUIDES; *INDUSTRIAL ARTS; *DRAFTING; SECONDARY GRADES; PREVOCATIONAL EDUCATION; RESOURCE MATERIALS; EDUCATIONAL EQUIPMENT

ABSTRACT - THIS CURRICULUM GUIDE WAS DEVELOPED BY TEACHERS, TEACHER EDUCATORS, AND SUPERVISORS FOR USE BY "APPROPRIATE PERSONNEL" IN JUNIOR AND SENIOR HIGH SCHOOL LEVEL DRAFTING PROGRAMS. FIFTEEN UNIT OUTLINES LIST (1) DISCUSSION TOPICS, (2) TEACHING AIDS, (3) GUIDANCE LITERATURE, (4) DEMONSTRATIONS OR EXPERIMENTS, (5) SUGGESTIONS FOR TEACHING, (6) TEXTBOOKS, AND (7) AN EQUIPMENT LIST. (EM)

VT 006 247
INDUSTRIAL ARTS CURRICULUM GUIDE FOR METALS.

OHIO STATE DEPARTMENT OF EDUCATION, COLUMBUS
OHIO INDUSTRIAL ARTS ASSOCIATION, COLUMBUS
OHIO STATE DEPARTMENT OF EDUCATION, STATE OFFICE BUILDING, 65 SOUTH FRONT STREET, COLUMBUS, OHIO 43215 (NO CHARGE).
PUB DATE - JUN67 45P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *METALS; SECONDARY GRADES; INSTRUCTIONAL AIDS; STUDENT PROJECTS

ABSTRACT - THIS CURRICULUM GUIDE WAS DEVELOPED BY TEACHERS, TEACHER EDUCATORS, AND SUPERVISORS FOR USE IN INDUSTRIAL ARTS METALS PROGRAMS IN JUNIOR AND SENIOR HIGH SCHOOLS. IT WAS PLANNED TO ASSIST IN THE ORGANIZATION OF INSTRUCTIONAL UNITS. UNITS INCLUDE: (1) METALS AND THEIR CHARACTERISTICS, (2) PROJECT PLANNING, (3) MEASUREMENT TECHNIQUES, (4) SHOP ORGANIZATION AND SAFETY, (5) CUTTING TECHNIQUES, (6) FORMING TECHNIQUES, (7) CASTING AND FOUNDRY, (8) FASTENING TECHNIQUES, (9) FINISHING TECHNIQUES, AND (10) MASS PRODUCTION, MACHINE CONTROLS, AND AUTOMATION. EACH UNIT IS KEYED TO FIVE TEXTS: (1) LUDWIG AND LUDWIG, "METALWORK TECHNOLOGY AND PRACTICE," (MCKNIGHT AND MCKNIGHT, 1962), (2) FEIRER, "GENERAL METALS," (MCGRAW-HILL, 1959), (3) FEIRER AND TATRO, "MACHINE TOOL METALWORKING," (MCGRAW-HILL, 1961), (4) WALKER, "MODERN METALWORK," (GOODHART WILCOX, 1965), AND (5) JOHNSON, "GENERAL INDUSTRIAL MACHINE SHOP," (C.A. BENNETT, 1963). SUPPLEMENTARY MATERIALS INCLUDE: (1) A REFERENCE BIBLIOGRAPHY, (2) ADDRESSES OF REFERENCE SOURCES, (3) SOURCES OF AUDIO-VISUAL MATERIALS, (4) SOURCES OF EQUIPMENT AND SUPPLIES, AND (5) AN EQUIPMENT AND TOOL LIST. (EM)

VT 006 248
INDUSTRIAL ARTS CURRICULUM GUIDE FOR WOODWORKING .

OHIO STATE DEPT. OF EDUCATION, COLUMBUS

IND ARTS

19

OHIO INDUSTRIAL ARTS ASSOCIATION, COLUMBUS
OHIO STATE DEPARTMENT OF EDUCATION, STATE
OFFICE BUILDING, 65 SOUTH FRONT STREET,
COLUMBUS, OHIO 43215 (COPIES AVAILABLE
WITHOUT CHARGE).

PUB DATE - NOV66 50P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; *PREVOCATIONAL EDUCATION; *WOODWORKING;
SECONDARY GRADES; TEACHING TECHNIQUES;
INSTRUCTIONAL AIDS; BIBLIOGRAPHIES; STUDENT
PROJECTS

ABSTRACT - THIS CURRICULUM GUIDE WAS
DEVELOPED BY TEACHERS, TEACHER EDUCATORS, AND
SUPERVISORS FOR USE IN COURSE PLANNING IN
INDUSTRIAL ARTS WOODWORKING AT THE JUNIOR AND
SENIOR HIGH SCHOOL LEVEL. ITS PURPOSE IS TO
AID TEACHERS IN PRESENTING WOODS AS AN
INTEGRAL PHASE OF INDUSTRIAL ARTS. UNITS
INCLUDE OUTLINES FOR: (1) CARVING IN WOOD,
(2) HOME CONSTRUCTION, (3) FURNITURE, (4)
SPORTS EQUIPMENT, (5) WOODENWARE, (6)
PATTERNMAKING, (7) MODELS, (8) WOOD TURNING,
(9) LAMINATING AND FORMING, (10) MASS
PRODUCTION IN WOODS, AND (11) FOREST
PRODUCTS. EACH UNIT GIVES DISCUSSION TOPICS,
TEACHING AIDS, DEMONSTRATIONS OR EXPERIMENTS,
AND PROJECT ACTIVITIES. SUPPLEMENTARY
MATERIALS INCLUDE A BIBLIOGRAPHY OF 101
TEXTBOOKS AND REFERENCES, A LIST OF TEACHING
AIDS AND THEIR SOURCES, AND AN EQUIPMENT AND
SUPPLY LIST. (EM)

VT 006 249

INDUSTRIAL ARTS CURRICULUM GUIDE FOR POWER
MECHANICS .

OHIO STATE DEPT. OF EDUCATION, COLUMBUS
OHIO INDUSTRIAL ARTS ASSOCIATION, COLUMBUS
OHIO STATE DEPARTMENT OF EDUCATION, STATE
OFFICE BUILDING, 65 SOUTH FRONT STREET,
COLUMBUS, OHIO 43215 (COPIES AVAILABLE
WITHOUT CHARGE).

PUB DATE - JAN68 141P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; *PREVOCATIONAL EDUCATION; *POWER
MECHANICS; AUTO MECHANICS; SECONDARY GRADES;
BIBLIOGRAPHIES; *INSTRUCTIONAL AIDS

ABSTRACT - THIS CURRICULUM GUIDE WAS
DEVELOPED BY TEACHERS, TEACHER EDUCATORS, AND
SUPERVISORS AND IS FOR USE BY TEACHERS IN
COURSE PLANNING FOR EITHER A POWER OR
AUTOMOTIVE TECHNOLOGY PROGRAM IN JUNIOR AND
SENIOR HIGH SCHOOLS. UNITS INCLUDE: (1) WIND
POWER, (2) WATER POWER, (3) STEAM POWER, (4)
SMALL GASOLINE ENGINES, (5) AUTOMOTIVES, (6)
OUTBOARD MARINE POWER, (7) INBOARD MARINE
POWER, (8) DIESEL ENGINES, (9) GAS TURBINES,
(10) POWER TRANSMISSIONS, (11) HYDRAULIC AND
PNEUMATIC POWER, (12) SOLAR ENERGY, (13) FUEL
CELLS, AND (14) ATOMIC POWER. EACH UNIT GIVES
(1) A TECHNICAL CONTENT OUTLINE, (2)
APPROPRIATE TEXTBOOKS AND REFERENCES, (3)
AUDIO-VISUAL AIDS, (4) TEACHING ACTIVITIES,
AND (5) STUDENT ACTIVITIES. TOPICS ARE KEYED
TO FOUR TEXTS, 107 REFERENCES, 79 FILMS, 70
FILMSTRIPS, 18 CHARTS, AND SIX TRANSPARENCY
SETS. (EM)

VT 006 260

DRAFTING I . CURRICULUM BULLETIN 270.

CINCINNATI PUBLIC SCHOOLS, OHIO
CINCINNATI PUBLIC SCHOOLS, 230 EAST NINTH
STREET, CINCINNATI, OHIO 45202 (\$2.50).
PUB DATE - 67 84P.

DESCRIPTORS - *CURRICULUM GUIDES; *TRADE AND
INDUSTRIAL EDUCATION; *INDUSTRIAL ARTS;
DRAFTSMEN; *DRAFTING; GRADE 10

ABSTRACT - THIS CURRICULUM GUIDE FOR TEACHER
USE IN PLANNING A DRAFTING COURSE FOR
SOPHOMORES WAS DEVELOPED BY LOCAL TEACHERS
AND SUPERVISORS AND WAS USED 1 YEAR BEFORE
BEING PUBLISHED. THE CONTENTS OF 12 UNITS ARE
ORGANIZED IN A SERIES OF CHARTS UNDER THESE
HEADINGS: (1) OPERATIONS OR CONCEPTS, (2)
WHAT THE PUPIL NEEDS TO KNOW, (3) RELATED
INFORMATION, (4) REFERENCE INFORMATION, (5)
SUGGESTED ASSIGNMENT, (6) ASSIGNMENT NUMBER,
AND (7) INSTRUCTIONAL AIDS. THE UNITS ARE (1)
USE OF DRAFTING MANUAL, (2) DRAFTING
MATERIALS, (3) ORTHOGRAPHIC SKETCHING, (4)
PICTORIAL SKETCHING, (5) DRAWING EQUIPMENT
AND USE OF DRAWING INSTRUMENTS, (6)
ENGINEERING LETTERING, (7) GEOMETRIC
CONSTRUCTION, (8) MULTIVIEW PROJECTION, (9)
DIMENSIONING, (10) SECTIONING, (11)
FASTENERS, AND (12) ELEMENTARY WORKING
DRAWINGS. THE MATERIAL IS TO BE USED 1 TO 2
HOURS PER DAY FOR 2 SEMESTERS. SUPPLEMENTARY
MATERIALS INCLUDE (1) A BIBLIOGRAPHY OF
FILMS, FILMSTRIPS, AND TRANSPARENCIES, (2)
DIRECTIONS FOR SUBSTITUTE TEACHERS, (3)
DESCRIPTION OF THE DRAFTING PROGRAM, AND (4)
A LIST OF TEXTS AND REFERENCES. THE "DRAFTING
STANDARDS MANUAL" (VT 006 236 AIM WINTER
1968) SHOULD BE USED WITH THIS GUIDE. (EM)

VT 006 262

ELECTRICITY I . CURRICULUM BULLETIN 276.

CINCINNATI PUBLIC SCHOOLS, OHIO
CINCINNATI PUBLIC SCHOOLS, 230 EAST NINTH
STREET, CINCINNATI, OHIO 45202 (\$2.50).
PUB DATE - 67 90P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; *TRADE AND INDUSTRIAL EDUCATION;
*ELECTRICAL OCCUPATIONS; *ELECTRICITY; GRADE
10

ABSTRACT - THIS CURRICULUM GUIDE IS FOR
TEACHER USE IN LESSON PLANNING FOR A
SOPHOMORE COURSE COVERING BASIC ELECTRICITY.
IT WAS DEVELOPED BY LOCAL TEACHERS AND
SUPERVISORS TO PROVIDE INFORMATION RELATING
TO INSTRUCTIONAL UNITS AND TEACHING
PROCEDURES FOR A BASIC COURSE. THREE SECTIONS
COVER (1) VISUAL AIDS, SUBSTITUTE TEACHERS,
COURSE DESCRIPTIONS, AND BOOKS, (2) A COURSE
OUTLINE, AND (3) PROCEDURES FOR 18 STUDENT
EXPERIMENTS. COURSE UNITS ARE (1)
INTRODUCTION TO ELECTRICITY, (2) BASIC
CIRCUITS AND MEASUREMENT, (3) INDUCTANCE AND
CAPACITANCE, (4) ALTERNATING CURRENT AND A.C.
CIRCUITS, AND (5) REACTIVE CIRCUITS AND
RESONANCE. EACH EXPERIMENT SHEET GIVES AN
OBJECTIVE, REQUIRED MATERIALS, CUMULATIVE
DATA, PROCEDURAL STEPS, AND REFERENCE
QUESTIONS. THE MATERIAL IS TO BE USED IN
PLANNING A 1-YEAR COURSE. SUPPLEMENTARY

MATERIALS INCLUDE A BIBLIOGRAPHY OF 28 FILMS AND FILMSTRIPS. (EM)

VT 006 323
INDUSTRIAL ARTS INSTRUCTIONAL GUIDE FOR GRADES K-6. ELEMENTARY SCHOOL PRACTICAL ARTS. PUBLICATION EC-150.

LOS ANGELES CITY SCHOOLS, CALIF. DIV. OF INSTRUCTIONAL SERVICES
PUB DATE - 63 103P.

DESCRIPTORS - *CURRICULUM GUIDES; *TEACHING GUIDES; *INDUSTRIAL ARTS; ELEMENTARY GRADES; *STUDENT PROJECTS

ABSTRACT - THIS CURRICULUM GUIDE IS A REVISION OF A 1953 GUIDE BY A LOCAL COMMITTEE OF TEACHERS, SUPERVISORS, AND PRINCIPALS. IT IS FOR USE BY ELEMENTARY TEACHERS AS A PRACTICAL REFERENCE IN PLANNING FOR THE INTEGRATION OF INDUSTRIAL ARTS ACTIVITIES IN THE DAILY PROGRAM OF KINDERGARTEN THROUGH GRADE 6. THE CONTENT IS ORGANIZED INTO THESE SECTIONS: (1) LOCAL EDUCATIONAL PHILOSOPHY, (2) KNOWLEDGE AND ACTIVITY OUTLINE, (3) SAFETY OUTLINE, (4) BASIC HAND TOOL OPERATIONS (ILLUSTRATED), (5) ILLUSTRATIONS AND DESCRIPTIONS OF TOOLS, OPERATIONS, AND MATERIALS, AND (6) PLANS FOR 50 SOCIAL SCIENCE, SCIENCE, AND PERSONAL INTEREST PROJECTS. (EM)

VT 006 430
THE NEW MEXICO STATE PLANNING GUIDE FOR INDUSTRIAL ARTS.

NEW MEXICO INDUSTRIAL ARTS ASSOCIATION
NEW MEXICO STATE DEPT. OF EDUCATION, SANTA FE
PUB DATE - 63 154P.

DESCRIPTORS - *STATE CURRICULUM GUIDES; *INDUSTRIAL ARTS; RESOURCE MATERIALS; *EDUCATIONAL PLANNING
IDENTIFIERS - NEW MEXICO

ABSTRACT - THIS PLANNING GUIDE, MEANT AS AN AID IN ESTABLISHING EFFICIENT INDUSTRIAL ARTS INSTRUCTION IN NEW MEXICO, IS FOR USE BY TEACHERS, ADMINISTRATORS, AND COUNSELORS. MAJOR SECTIONS OF THE GUIDE ARE (1) INTRODUCTION, (2) OBJECTIVES OF INDUSTRIAL ARTS, (3) PERSONNEL MANAGEMENT, (4) SAFETY IN THE SCHOOL SHOP, AND (5) CONTENT. THE LATTER SECTION CONTAINS 30 BRIEF OUTLINES SUGGESTING CONTENT FOR COURSES IN DRAFTING, ELECTRICITY, GRAPHIC ARTS, MECHANICS, WOODWORKING, METALWORKING, AND CRAFTS. INCLUDED WITH THE OUTLINES ARE OBJECTIVES, NECESSARY MATERIALS, SUGGESTED PROJECTS, AND INSTRUCTIONAL AIDS. A PHILOSOPHICAL STATEMENT CONCERNING THE STATE'S INDUSTRIAL ARTS PROGRAM IS INCLUDED. (EM)

VT 006 452
INDUSTRIAL ARTS GRADES 7-8. (TENTATIVE).

ROCHESTER CITY SCHOOL DISTRICT, N.Y. DIV. OF INSTRUCTION
PUB DATE - 67 116P.

DESCRIPTORS - *CURRICULUM GUIDES; GRADE 7;

GRADE 8; *INDUSTRIAL ARTS; JUNIOR HIGH SCHOOLS; JUNIOR HIGH SCHOOL STUDENTS; INDIVIDUAL CHARACTERISTICS; STUDENT PROJECTS

ABSTRACT - THE EXPERIMENTAL CURRICULUM MATERIALS FOR GRADES 7-8 WERE DEVELOPED BY TEAMS OF TEACHERS AND CONSULTANTS, TESTED IN THE CLASSROOM BETWEEN 1966 AND 1968, AND USED IN TEACHER TRAINING SESSIONS DURING THE SUMMER OF 1968. THE COURSE OUTLINE IS DIVIDED INTO AREAS BY GRADE LEVELS. GRADE 7 INCLUDES WOOD, CERAMICS, DRAWING, AND PLASTICS. GRADE 8 COVERS ELECTRICITY, GRAPHIC ARTS, METAL AND POWER. A 5-WEEK SEQUENTIAL TEACHING PLAN IS SUGGESTED FOR EACH INSTRUCTIONAL AREA. EACH UNIT CONTAINS INTRODUCTORY MATERIALS WHICH EXPLAIN THE UNIT OBJECTIVES AS WELL AS CONCEPTS, TEACHER AND PUPIL ACTIVITIES, AND VOCABULARY. PHYSICAL, MENTAL AND EMOTIONAL, AND SOCIAL CHARACTERISTICS OF JUNIOR HIGH SCHOOL STUDENTS ARE LISTED IN THE DOCUMENT AS WELL AS THE IMPLICATIONS OF THE FOREMENTIONED FACTORS FOR PROGRAM PLANNING. (FP)

VT 006 462
INDUSTRIAL ARTS TEACHERS' HANDBOOK.

ROCHESTER CITY SCHOOL DISTRICT, N.Y.
ROCHESTER CITY SCHOOL DISTRICT, 13 SOUTH FITZHUGH STREET, ROCHESTER, NEW YORK 14614 (\$.90).
PUB DATE - 64 51P.

DESCRIPTORS - *INDUSTRIAL ARTS; *TEACHING GUIDES; SECONDARY GRADES; SCHOOL SAFETY; SCHOOL SHOPS; TEACHER RESPONSIBILITY; *ADMINISTRATIVE POLICY
IDENTIFIERS - *ROCHESTER CITY SCHOOL DISTRICT; NEW YORK

ABSTRACT - THIS HANDBOOK WAS DESIGNED AS A SOURCE OF INFORMATION FOR SECONDARY INDUSTRIAL ARTS TEACHERS IN LESSON PLANNING AND SHOP ORGANIZATION. IT WAS DEVELOPED BY A CURRICULUM GROUP AND TESTED OVER A 2-YEAR PERIOD. THE CONTENT OBJECTIVES ARE TO ACQUAINT TEACHERS WITH THEIR PROFESSIONAL RESPONSIBILITIES, THEIR CLASSROOM RESPONSIBILITIES, SAFETY RULES OF THE SHOP, AND ADMINISTRATIVE POLICIES AND PROCEDURES. THIS IS A PRINTED DOCUMENT WITH SAMPLES OF RECORDING FORMS, EVALUATION TESTS FOR TEACHERS AND STUDENTS, AND SAFETY CHECK LISTS. SUGGESTED SAFETY MARKERS, AND ORDER FORMS. (GR)

VT 006 597
INDUSTRIAL ARTS, DRAFTING 1. TEACHER'S GUIDE.

ROCHESTER CITY SCHOOL DISTRICT, N.Y.
PUB DATE - 65 62P.

DESCRIPTORS - *INDUSTRIAL ARTS; *CURRICULUM GUIDES; SECONDARY GRADES; *DRAFTING; INSTRUCTIONAL MATERIALS; COURSE ORGANIZATION

ABSTRACT - THIS CURRICULUM GUIDE IS FOR TEACHER USE IN LESSON PLANNING FOR HIGH SCHOOL INDUSTRIAL ARTS DRAFTING. SECTIONS ARE: INTRODUCTION, SCOPE, USING THE COURSE, AND DRAWING UNITS. DRAWING UNITS ARE: (1) TWO VIEW ORTHOGRAPHIC PROJECTION, (2) THREE VIEW ORTHOGRAPHIC PROJECTION, (3) AUXILIARY VIEWS,

(4) SECTIONAL VIEWS, (5) DETAIL AND ASSEMBLY DRAWINGS, (6) PATTERN DEVELOPMENTS, AND (7) PICTORIAL DRAWINGS, (6) PATTERN DEVELOPMENTS, AND (7) PICTORIAL DRAWINGS--ISOMETRIC. EACH UNIT CONTAINS LINE DRAWINGS OF STUDENT PROJECTS AND INSTRUCTIONAL CONCEPTS TO BE LEARNED. (GR)

VT 006 598

DRAFTING I. STUDENT PROBLEMS.

ROCHESTER CITY SCHOOL DISTRICT, N.Y.
ROCHESTER CITY SCHOOL DISTRICT, 13 SOUTH
FITZHUGH STREET, ROCHESTER, NEW YORK 14614
(\$1.00).
PUB DATE - 65 57P.

DESCRIPTORS - *RESOURCE GUIDES; *INDUSTRIAL
ARTS; STUDENT PROJECTS; SECONDARY GRADES;
*DRAFTING; TRANSPARENCIES

ABSTRACT - THIS RESOURCE GUIDE IS FOR TEACHER
USE IN PLANNING A COURSE FOR HIGH SCHOOL
DRAFTING. THE CONTENT OBJECTIVES ARE TO
DEVELOP SKILLS AND UNDERSTANDING REQUIRED IN:
(1) 2-VIEW ORTHOGRAPHIC PROJECTION, (2) 3-
VIEW ORTHOGRAPHIC PROJECTION, (3) AUXILIARY
VIEWS, (4) SECTIONAL VIEWS, (5) DETAIL AND
ASSEMBLY DRAWINGS, (6) PATTERN DEVELOPMENT,
AND (7) PICTORIAL DRAWINGS - ISOMETRIC. THIS
DOCUMENT IS ILLUSTRATED WITH 33 LINE DRAWINGS
WHICH MAY BE REPRODUCED AS STUDENT
ASSIGNMENTS OR FOR USE AS OVERHEAD
TRANSPARENCIES. EACH DRAWING STATES THE
PROBLEM, DIRECTIONS, AND REFERENCES USED.
(GR)

VT 006 650

GENERAL METAL WORK 1 AND 2. COURSE OF STUDY.

ROCHESTER CITY SCHOOL DISTRICT, N.Y.
INDUSTRIAL ARTS DEPT.
ROCHESTER CITY SCHOOL DISTRICT, 13 SOUTH
FITZHUGH STREET, ROCHESTER, NEW YORK 14614
(\$1.15).
PUB DATE - 64 72P.

DESCRIPTORS - *INDUSTRIAL ARTS; *CURRICULUM
GUIDES; *METAL WORKING OCCUPATIONS; *METALS;
SECONDARY GRADES; COURSE OBJECTIVES;
BIBLIOGRAPHIES; INSTRUCTIONAL MATERIALS;
STUDENT PROJECTS
IDENTIFIERS - ROCHESTER; NEW YORK

ABSTRACT - THIS PROGRAM GUIDE IS FOR TEACHER
USE IN PLANNING AND OPERATING A LOCAL
METALWORKING PROGRAM CONSISTING OF TWO 18-
HOUR COURSES, GENERAL METAL WORK 1, A
BEGINNING COURSE, AND GENERAL METALWORK 2, AN
ADVANCED COURSE. THEY WERE DEVELOPED BY AN
INDUSTRIAL ARTS CURRICULUM COMMITTEE TO
PROVIDE UNIFORMITY OF OFFERINGS FOR A CITY-
WIDE PROGRAM. MAJOR UNITS OF GENERAL
METALWORK 1 ARE: (1) ART METAL, (2) TOOL
OPERATION, (3) WROUGHT IRON AND FORGING, (4)
WELDING ARC AND GAS, (5) SHEET METAL, AND (6)
FOUNDRY, WHILE MAJOR UNITS OF GENERAL
METALWORK 2 ARE: (1) ART METAL, (2) MACHINE
TOOL OPERATIONS, (3) HEAT TREATMENT, (4)
WELDING, AND (5) SHEET METAL. EACH SECTION
HAS BEEN DIVIDED INTO INDIVIDUAL UNITS OF
INSTRUCTION WITH EACH LISTING THE THINGS THAT
A STUDENT SHOULD BE ABLE TO DO, THE THINGS A

STUDENT SHOULD UNDERSTAND, AND A LIST OF
SUGGESTED ACTIVITIES TO BRING ABOUT THE
DESIRED LEARNINGS. AT THE END OF EACH UNIT,
SUGGESTED DEMONSTRATIONS AND RELATED LESSONS
ARE LISTED. SUPPLEMENTAL MATERIALS INCLUDE
UNITS ON HEALTH AND SAFETY, CITIZENSHIP,
AVOCATIONAL PURSUITS, AND AN EXTENSIVE
BIBLIOGRAPHY OF REFERENCES. (GR)

VT 006 661

AN INSTRUCTIONAL GUIDE FOR INDUSTRIAL
WOODWORKING. SENIOR HIGH SCHOOL INDUSTRIAL
EDUCATION.

LOS ANGELES CITY SCHOOLS, CALIF. DIV. OF
INSTRUCTIONAL PLANNING AND SERVICES
SC-636
ADMINISTRATIVE SERVICES BRANCH, LOS ANGELES
CITY SCHOOLS, 450 NORTH GRAND AVENUE, P.O.
BOX 3307, LOS ANGELES, CALIFORNIA 90054
(\$1.00).
PUB DATE - 68 120P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; *TRADE AND INDUSTRIAL EDUCATION;
*WOODWORKING; *CARPENTERS; SECONDARY GRADES

ABSTRACT - THIS CURRICULUM GUIDE WAS DESIGNED
FOR USE BY INDUSTRIAL EDUCATION TEACHERS OF
SENIOR-HIGH SCHOOL WOODWORKING COURSES. IT
WAS DEVELOPED BY LOCAL TEACHERS, SUPERVISORS,
AND ADMINISTRATORS AND WAS TESTED IN
CLASSROOM USE BEFORE PUBLICATION. INDUSTRIAL
WOODWORKING 1 AND 2 IS A TWO SEMESTER, SINGLE
PERIOD INDUSTRIAL ARTS COURSE WHILE
INDUSTRIAL WOODWORKING 3, 4, 5, AND 6 ARE
OCCUPATIONALLY ORIENTED COURSES FOCUSING ON
OCCUPATIONALLY ORIENTED ACTIVITIES AND
PROCESSES OF WOODWORKING. A 2-COLUMN FORMAT
PRESENTS SELECTED SKILLS, PROCESSES, AND
ACTIVITIES. FOR EACH OF THESE LISTS, TOPICS
IN RELATED TECHNICAL INFORMATION ARE
SUGGESTED. SOME OF THE MAJOR HEADINGS
INCLUDED IN BOTH TYPES OF COURSES ARE: (1)
PLANNING, (2) LAYOUT, (3) HOLDING DEVICES,
(4) CUTTING TOOLS, (5) FASTENERS, (6)
JOINERY, (7) GLUING AND CLAMPING, (8) DRIVING
TOOLS, (9) HARDWARE APPLICATIONS, (10)
WOODWORKING MACHINES, (11) HOME MECHANICS,
(12) CABINETMAKING, (13) HOUSE CONSTRUCTION,
(14) MASONRY, (15) PATTERNMAKING, (16)
UPHOLSTERY, AND (17) SAFETY. SUPPLEMENTARY
MATERIALS INCLUDE SAFETY RULES AND A SAMPLE
SAFETY TEST. (EM)

VT 006 765

GRAPHIC ARTS 1 AND 2. COURSE OF STUDY.

ROCHESTER CITY SCHOOL DISTRICT, N.Y.
INDUSTRIAL ARTS DEPT.
ROCHESTER CITY SCHOOL DISTRICT, 13 SOUTH
FITZHUGH STREET, ROCHESTER, NEW YORK 14614
(\$1.30).
PUB DATE - 64 77P.

DESCRIPTORS - *INDUSTRIAL ARTS; *CURRICULUM
GUIDES; SECONDARY GRADES; BIBLIOGRAPHIES;
INSTRUCTIONAL MATERIALS; STUDENT PROJECTS;
*GRAPHIC ARTS; *PRINTING

ABSTRACT - THIS PROGRAM GUIDE IS FOR TEACHER
USE IN PLANNING AND OPERATING A GRAPHIC ARTS
PROGRAM CONSISTING OF TWO 40-WEEK COURSES:

GRAPHIC ARTS 1, A BEGINNING COURSE, AND GRAPHIC ARTS 2, AN ADVANCED COURSE. THEY WERE DEVELOPED BY AN INDUSTRIAL ARTS CURRICULUM COMMITTEE TO PROVIDE UNIFORMITY OF OFFERINGS FOR A CITY-WIDE PROGRAM. MAJOR UNITS OF GRAPHIC ARTS 1 ARE: (1) INTRODUCTION, (2) LAYOUT, (3) HAND COMPOSITION, (4) RELIEF PRINTING (LETTERPRESS, LINOLEUM CUTS, RUBBER STAMP), (5) PRINTING INKS, (6) STOCKWORK, (7) BOOKBINDING, (8) SILKSCREEN, (9) PHOTOGRAPHY, (10) RELATED MATERIAL (PAPER), AND (11) VOCABULARY. MAJOR UNITS OF GRAPHIC ARTS 2 ARE: (1) INTRODUCTION, (2) HAND COMPOSITION, (3) LAYOUT, (4) COPY PREPARATION, (5) IMPOSITION, (6) PHOTOGRAPHY, (7) OFFSET PRINTING, (8) SILK SCREEN, (9) BOOKBINDING, (10) PAPER MAKING, (11) RELATED INFORMATION (MACHINE COMPOSITION, PRESSWORK, PROCESS REPORT, PRODUCT REPORT, OCCUPATIONAL REPORT), (12) VOCABULARY. EACH UNIT LISTS THE THINGS THAT A STUDENT SHOULD BE ABLE TO DO, THE THINGS HE SHOULD UNDERSTAND, AND A LIST OF SUGGESTED ACTIVITIES. SUPPLEMENTAL MATERIALS INCLUDE UNITS ON HEALTH AND SAFETY, CITIZENSHIP, AVOCATIONAL PURSUITS, A FILM LIST AND A BIBLIOGRAPHY OF REFERENCES. THE DOCUMENT IS ILLUSTRATED WITH PHOTOGRAPHS. (GR)

VT 006 976
PERFORMANCE PRE-TEST FOR STUDENTS USING THE EXPANDABLE POLYSTYRENE PLASTICS UNIT.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF EDUCATION
PUB DATE - NO 9P.

DESCRIPTORS - *PERFORMANCE TESTS; *INDUSTRIAL ARTS; *PLASTICS; SECONDARY GRADES
IDENTIFIERS - *EXPANDABLE POLYSTYRENE BEADS

ABSTRACT - THIS TEST WAS DEVELOPED FOR USE WITH A GROUP OF INSTRUCTIONAL MATERIALS DESIGNED FOR A UNIT ON EXPANDABLE POLYSTYRENE PLASTICS. THIS UNIT IS FOR USE IN SECONDARY INDUSTRIAL ARTS COURSES. THE TEST WAS DEVELOPED TO OBTAIN A MEASURE OF STUDENT PERFORMANCE PRIOR TO THE USE OF FOUR FILMS AND FOUR PROGRAMED TEXTS. IT WAS DEVELOPED IN A FEDERALLY FUNDED DEVELOPMENT PROJECT WHICH TESTED ITS MATERIALS IN NINE HIGH SCHOOLS. INSTRUCTIONS FOR CONDUCTING THE PERFORMANCE TEST ARE GIVEN IN DETAIL. RECORDS ARE KEPT BY THE TEACHER OF THE STUDENT'S PERFORMANCE. OTHER RELATED DOCUMENTS ARE ED 019 512 AND VT 006 977-VT 006 984. (EM)

VT 006 977
KNOWLEDGE PRE-TEST; CONSTRUCTING EXPANDABLE POLYSTYRENE PLASTIC ICE BUCKET.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF EDUCATION
PUB DATE - NO 6P.

DESCRIPTORS - *TESTS; *INDUSTRIAL ARTS; *PLASTICS; SECONDARY GRADES
IDENTIFIERS - *EXPANDABLE POLYSTYRENE BEADS

ABSTRACT - THIS MULTIPLE CHOICE TEST OF 22 ITEMS WAS DEVELOPED FOR USE WITH A GROUP OF INSTRUCTIONAL MATERIALS DESIGNED FOR A UNIT ON EXPANDABLE POLYSTYRENE PLASTICS. THIS UNIT

IS FOR USE IN SECONDARY INDUSTRIAL ARTS COURSES. THE TEST WAS DEVELOPED TO OBTAIN A MEASURE OF STUDENT KNOWLEDGE PRIOR TO THE USE OF FOUR FILMS AND FOUR PROGRAMED TEXTS. IT WAS DEVELOPED IN A FEDERALLY FUNDED DEVELOPMENT PROJECT WHICH TESTED ITS MATERIALS IN NINE HIGH SCHOOLS. OTHER RELATED DOCUMENTS ARE ED 019 512 AND VT 006 976-VT 006 984. (EM)

VT 006 978
PERFORMANCE CHECKLIST NO. 1; THE PRE-EXPANSION OF EXPANDABLE POLYSTYRENE BEADS.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF EDUCATION
PUB DATE - NO 11P.

DESCRIPTORS - *CHECKLISTS; *PERFORMANCE TESTS; *INDUSTRIAL ARTS; *PLASTICS; SECONDARY GRADES
IDENTIFIERS - *EXPANDABLE POLYSTYRENE BEADS

ABSTRACT - THIS PERFORMANCE CHECKLIST WAS DEVELOPED FOR USE WITH A GROUP OF INSTRUCTIONAL MATERIALS DESIGNED FOR A UNIT ON EXPANDABLE POLYSTYRENE PLASTICS. THE FOUR PARTS OF THE CHECKLIST COVER THE TOPICS WHICH ARE COVERED IN FOUR PROGRAMED TEXTS: (1) THE PRE-EXPANSION OF EXPANDABLE POLYSTYRENE BEADS, (2) PREPARATION AND ASSEMBLY OF MOLD, (3) MOLDING THE PRE-EXPANSION POLYSTYRENE BEADS, AND (4) REMOVING THE FOAMED PIECE. PERFORMANCE ELEMENTS ARE RATED BY THE INSTRUCTOR AS THE STUDENT MAKES A MOLOED PRODUCT OF THE BEADS. IT WAS PREPARED IN A FEDERALLY FUNDED DEVELOPMENT PROJECT WHICH TESTED ITS MATERIALS IN NINE HIGH SCHOOLS. OTHER RELATED DOCUMENTS ARE ED 019 512 AND VT 006 976-VT 006 984. (EM)

VT 006 979
NISH, DALE L.
EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 1, PRE-EXPANSION OF EXPANDABLE POLYSTYRENE BEADSL.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF EDUCATION
PUB DATE - NO 43P.

DESCRIPTORS - *PROGRAMED TEXTS; *INDUSTRIAL ARTS; *PLASTICS; SECONDARY GRADES
IDENTIFIERS - *EXPANDABLE POLYSTYRENE BEADS

ABSTRACT - THIS SCRAMBLED, PROGRAMED TEXT IS THE FIRST IN A SERIES OF FOUR TEXTS ON THE MOLDING OF EXPANDABLE POLYSTYRENE PLASTICS. IT IS DESIGNED TO PROVIDE A REVIEW OF THE BMM CONTINUOUS LOOP FILM, "PRE-EXPANSION OF EXPANDABLE POLYSTYRENE BEADS" WHICH IS AVAILABLE FROM HOLLYWOOD VALLEY FILM LABORATORIES, INC., 2704 WEST OLIVE AVENUE, BURBANK, CALIFORNIA 91505. THE AUTHOR DEVELOPED THIS TEXT WITHIN A FEDERALLY FUNDED DEVELOPMENT PROJECT AND TESTED IT IN INDUSTRIAL ARTS CLASSES IN NINE HIGH SCHOOLS. THE EMPHASIS OF THE CONTENT IS ON THE STUDENT LEARNING THE CORRECT PROCEDURE FOR PRE-EXPANDING RAW POLYSTYRENE BEADS IN BOILING WATER AND DRYING THEM. OTHER RELATED DOCUMENTS ARE ED 019 512 AND VT 006 976-VT 006 984. (EM)

IND ARTS

23

VT 006 980
NISH, DALE L.
EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION
BOOK NO. 2, PREPARATION AND ASSEMBLY OF
MOLDL.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF
EDUCATION
PUB DATE - ND 41P.

DESCRIPTORS - *PROGRAMED TEXTS; *INDUSTRIAL
ARTS; *PLASTICS; SECONDARY GRADES
IDENTIFIERS - *EXPANDABLE POLYSTYRENE BEADS

ABSTRACT - THIS SCRAMBLED, PROGRAMED TEXT IS
THE SECOND IN A SERIES OF FOUR TEXTS ON THE
MOLDING OF EXPANDABLE POLYSTYRENE PLASTICS.
IT IS DESIGNED TO PROVIDE A REVIEW OF THE 8MM
CONTINUOUS LOOP FILM, "PREPARATION AND
ASSEMBLY OF MOLD" WHICH IS AVAILABLE FROM
HOLLYWOOD VALLEY FILM LABORATORY, INC., 2704
WEST OLIVE AVENUE, BURBANK, CALIFORNIA 91505.
THE AUTHOR DEVELOPED THIS TEXT WITHIN A
FEDERALLY FUNDED DEVELOPMENT PROJECT AND
TESTED IT IN INDUSTRIAL ARTS CLASSES IN NINE
HIGH SCHOOLS. THE EMPHASIS OF THE CONTENT IS
ON THE STUDENT LEARNING HOW SUCH MOLDS ARE
PREPARED. OTHER RELATED DOCUMENTS ARE ED 019
512 AND VT 006 976-VT 006 984. (EM)

VT 006 981
NISH, DALE L.
EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION
BOOK NO. 3, MOLDING THE PRE-EXPANDED
POLYSTYRENE BEADSL.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF
EDUCATION
PUB DATE - ND 47P.

DESCRIPTORS - *PROGRAMED TEXTS; *INDUSTRIAL
ARTS; *PLASTICS; SECONDARY GRADES
IDENTIFIERS - *EXPANDABLE POLYSTYRENE BEADS

ABSTRACT - THIS SCRAMBLED, PROGRAMED TEXT IS
THE THIRD IN A SERIES OF FOUR TEXTS ON THE
MOLDING OF EXPANDABLE POLYSTYRENE PLASTICS.
IT IS DESIGNED TO PROVIDE A REVIEW OF THE 8MM
CONTINUOUS LOOP FILM, "MOLDING OF PRE-
EXPANDED POLYSTYRENE BEADS" WHICH IS
AVAILABLE FROM HOLLYWOOD VALLEY FILM
LABORATORIES, INC., 2704 WEST OLIVE AVENUE,
BURBANK, CALIFORNIA 91505. THE AUTHOR
DEVELOPED THIS TEXT WITHIN A FEDERALLY FUNDED
DEVELOPMENT PROJECT AND TESTED IT IN
INDUSTRIAL ARTS CLASSES IN NINE HIGH SCHOOLS.
THE EMPHASIS OF THE CONTENT IS ON THE STUDENT
LEARNING HOW TO PREPARE MOLDS FOR PRODUCTS
MADE OF POLYSTYRENE BEADS. OTHER RELATED
DOCUMENTS ARE ED 019 512 AND VT 006 976-VT
006 984. (EM)

VT 006 982
NISH, DALE L.
EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION
BOOK NO. 4, REMOVING THE FOAMED PIECEL.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF
EDUCATION
E
PUB DATE - ND 33P

DESCRIPTORS - *PROGRAMED TEXTS; *INDUSTRIAL

ARTS; *PLASTICS; SECONDARY GRADE
IDENTIFIERS - *EXPANDABLE POLYSTYRENE BEAD

ABSTRACT - THIS SCRAMBLED, PROGRAMED TEXT IS
THE LAST IN A SERIES OF FOUR TESTS ON THE
MOLDING OF EXPANDABLE POLYSTYRENE PLASTICS.
IT IS DESIGNED TO PROVIDE A REVIEW OF THE 8MM
CONTINUOUS LOOP FILM, "REMOVING THE FORMED
PIECE" WHICH IS AVAILABLE FROM HOLLYWOOD
VALLEY FILM LABORATORIES, INC., 2704 WEST
OLIVE AVENUE, BURBANK, CALIFORNIA 91505. THE
AUTHOR DEVELOPED THIS TEXT WITHIN A FEDERALLY
FUNDED DEVELOPMENT PROJECT AND TESTED IT IN
INDUSTRIAL ARTS CLASSES IN NINE HIGH SCHOOLS.
THE EMPHASIS OF THE CONTENT IS ON THE STUDENT
LEARNING HOW TO PROPERLY REMOVE THE MOLOED
PIECE FROM THE MOLD. OTHER RELATED DOCUMENTS
ARE ED 019 512 AND VT 006 976-VT 006 984.
(EM)

VT 006 983
NISH, DALE L.
EXPANDABLE POLYSTYRENE PLASTICS; STUDENT
GUIDEL.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF
EDUCATION
PUB DATE - ND 17P.

DESCRIPTORS - *STUDY GUIDES; *INDUSTRIAL
ARTS; *PLASTICS; SECONDARY GRADES
IDENTIFIERS - *EXPANDABLE POLYSTYRENE BEADS

ABSTRACT - THIS STUDY GUIDE IS PART OF A
PROGRAMED UNIT ON THE MOLDING OF EXPANDABLE
POLYSTYRENE PLASTIC. IT WAS DEVELOPED BY THE
AUTHOR WITHIN A FEDERALLY FUNDED DEVELOPMENT
PROJECT AND TESTED IN INDUSTRIAL ARTS CLASSES
IN NINE HIGH SCHOOLS. INCLUDED ARE STEP BY
STEP PROCEOURES FOR THE USE OF FIVE
EDUCATIONAL FILMS AND FOUR PROGRAMED TEXTS.
ANSWER SHEETS WHICH ARE TO BE USED WITH THE
PROGRAMED TEXTS ARE INCLUDED. OTHER RELATED
DOCUMENTS ARE ED 019 512 AND VT 006 976-VT
006 984. (EM)

VT 006 984
NISH, DALE L.
EXPANDABLE POLYSTYRENE PLASTICS; TEACHER'S
GUIDEL.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF
EDUCATION
PUB DATE - ND 15P.

DESCRIPTORS - *TEACHING GUIDES; *INDUSTRIAL
ARTS; *PLASTICS; SECONDARY GRADES
IDENTIFIERS - *EXPANDABLE POLYSTYRENE BEADS

ABSTRACT - THIS GUIDE IS FOR TEACHER USE WITH
A UNIT ON THE MOLDING OF EXPANDABLE
POLYSTYRENE PLASTIC AND IS PART OF A SERIES
OF PROGRAMED MATERIALS WRITTEN TO ACCOMPANY A
GROUP OF EDUCATIONAL FILMS ON THIS TOPIC. THE
UNIT INVOLVES THE COMPLETION OF A MOLOED
PLASTIC PRODUCT BY EACH STUDENT. IT PROVIDES
BEHAVIORAL OBJECTIVES, EQUIPMENT AND FILM
LISTS, AND INSTRUCTIONAL PROCEDURES. THE FOUR
TOPICS IN THE UNIT ARE: (1) PRE-EXPANSION OF
EXPANDABLE POLYSTYRENE BEADS, (2) PREPARATION
AND ASSEMBLY OF MOLDS, (3) MOLDING THE PRE-
EXPANDED POLYSTYRENE BEADS, AND (4) REMOVING
THE FOAMED PIECE. CONTINUOUS LOOP 8MM FILMS

BY THESE SAME TITLES ARE AVAILABLE FROM HOLLYWOOD VALLEY FILM LABORATORIES, INC., 2704 WEST OLIVE AVENUE, BURBANK, CALIFORNIA 91505. OTHER MATERIALS DEVELOPED BY THE AUTHOR IN A FEDERALLY FUNDED DEVELOPMENT PROJECT ARE ED 019 512 AND VT 006 976-VT 006 983. (EM)

VT 006 985
ELECTRIC ARC WELDING; KNOWLEDGE PRE-TEST.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF EDUCATION
OFFICE OF EDUCATION (OHEW), WASHINGTON, D.C.
PUB DATE - ND 6P.

DESCRIPTORS - *PRETESTS; *INDUSTRIAL EDUCATION; *WELDERS; *WELDING; SECONDARY GRADES

ABSTRACT - DEVELOPED BY A SYSTEM DESIGNER, ACADEMIC CONSULTANTS, TEACHERS, AND RESEARCH ASSISTANTS, AND FIELD TESTED IN NINE NORTHWEST SCHOOLS PRIOR TO REVISION AND PUBLICATION, THIS KNOWLEDGE PRETEST IS PART OF A SELF-INSTRUCTIONAL SYSTEM PRODUCED BY THE WASHINGTON STATE UNIVERSITY DEPARTMENT OF EDUCATION FOR USE IN HIGH SCHOOL INDUSTRIAL ARTS CLASSES STUDYING BEGINNING ELECTRIC WELDING. THE PURPOSE OF THE TEST IS TO DISCOVER HOW MUCH STUDENTS KNOW ABOUT ELECTRIC ARC WELDING BEFORE RECEIVING ANY WELDING INSTRUCTION IN ORDER TO LATER EVALUATE THE EFFECTIVENESS OF THE INSTRUCTIONAL SYSTEM. THE TEST IS COMPOSED OF 30 INCOMPLETE SENTENCES, EACH WITH FOUR ALTERNATIVE CHOICES FOR COMPLETION. SUPPLEMENTAL MEDIA NECESSARY IN TEACHING THE WELDING COURSE ARE EIGHT 8-MM FILMS AVAILABLE FROM HOLLYWOOD VALLEY FILM LABORATORIES, INC., 2704 W. OLIVE AVENUE, BURBANK, CALIFORNIA 91505. OTHER DOCUMENTS IN THE SERIES ARE VT 006 989, VT 006 991, VT 006 992, VT 007 011, AND VT 007 360, ALL IN THIS ISSUE. (AW)

VT 006 989
SERGEANT, HAROLD A.; NISH, DALE L.
ELECTRIC ARC WELDING; INSTRUCTION BOOK II.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF EDUCATION
OFFICE OF EDUCATION (OHEW), WASHINGTON, D.C.
PUB DATE - ND 110P.

DESCRIPTORS - *PROGRAMED TEXTS; *INDUSTRIAL EDUCATION; *WELDERS; *WELDING; SECONDARY GRADES

ABSTRACT - DEVELOPED BY A SYSTEM DESIGNER, ACADEMIC CONSULTANTS, TEACHERS, AND RESEARCH ASSISTANTS, AND FIELD TESTED IN NINE NORTHWEST SCHOOLS PRIOR TO REVISION AND PUBLICATION, THIS PROGRAMED TEST IS PART OF A SELF-INSTRUCTIONAL SYSTEM PRODUCED BY THE WASHINGTON STATE UNIVERSITY DEPARTMENT OF EDUCATION FOR USE BY HIGH SCHOOL INDUSTRIAL ARTS STUDENTS IN ELECTRIC WELDING COURSES. A CONTINUATION OF VT 007 360 (IN THIS ISSUE), THIS UNIT OF INSTRUCTION IS DESIGNED TO AID STUDENTS IN ACQUIRING ADVANCED WELDING SKILLS AND KNOWLEDGES AS WELL AS IMPROVED UNDERSTANDING OF FUNDAMENTALS OF THE ARC

WELDING PROCESS. IT IS SET UP IN THE PROGRAMED FORMAT, WITH A STATEMENT OF FACT FOLLOWED BY A "COMPLETE THIS SENTENCE" EXERCISE. THIS EXERCISE FOLLOWS THE FACT IMMEDIATELY WITH NO PROVISION FOR MASKING; ANSWERS ARE GIVEN ON THE FOLLOWING PAGE. THE TEXT IS KEYED TO FOUR 8-MM FILMS AND PRACTICE EXERCISES TITLED "WELDING ESSENTIALS," "WEAVE BEADS," "FILLET WELD," AND "HORIZONTAL FILLET." THE FILMS ARE AVAILABLE FROM HOLLYWOOD VALLEY FILMS LABORATORIES, INC., 2704 W. OLIVE AVENUE, BURBANK, CALIFORNIA 91505. AN ANSWER BOOKLET MAY BE OBTAINED FROM THE SOURCE OF AVAILABILITY INDICATED FOR THIS DOCUMENT. OTHER DOCUMENTS IN THE SERIES ARE VT 006 991, VT 006 992, AND VT 007 011, ALL IN THIS ISSUE. (AW)

VT 006 992
SERGEANT, HAROLD A.
ELECTRIC ARC WELDING; INSTRUCTOR'S GUIDE.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF EDUCATION
OFFICE OF EDUCATION (OHEW), WASHINGTON, D.C.
PUB DATE - ND 12P.

DESCRIPTORS - *TEACHING GUIDES; INSTRUCTIONAL MEDIA; *INDUSTRIAL EDUCATION; *WELDERS; *WELDING; INSTRUCTIONAL MATERIALS; SECONDARY GRADES

ABSTRACT - THIS INSTRUCTOR'S GUIDE IS PART OF A SELF-INSTRUCTIONAL SYSTEM PRODUCED BY THE WASHINGTON STATE UNIVERSITY DEPARTMENT OF EDUCATION FOR USE IN TEACHING HIGH SCHOOL INDUSTRIAL ARTS CLASSES BEGINNING ELECTRIC ARC WELDING. IT WAS DEVELOPED BY A SYSTEM DESIGNER, CONSULTANTS, TEACHERS, AND RESEARCH ASSISTANTS, AND FIELD TESTED IN NINE NORTHWEST SCHOOLS PRIOR TO REVISION AND PUBLICATION. THE GUIDE PROVIDES: (1) GENERAL INFORMATION ON THE SYSTEM, (2) OPERATIONAL AND BEHAVIORAL OBJECTIVES, (3) VARIOUS INSTRUCTIONAL MEDIA AND METHODS, INCLUDING FILMS, INSTRUCTION BOOKS, PRACTICE SESSIONS, PRETESTS, AND EVALUATION METHODS, (4) EQUIPMENT AND MATERIALS NEEDED, AND (5) PROCEDURES FOR USING THE SYSTEM. OTHER DOCUMENTS IN THE SERIES ARE VT 006 985, VT 006 989, VT 006 991, VT 007 011, AND VT 007 360, ALL IN THIS ISSUE. (AW)

VT 006 998
HILL, EDWIN K., AND OTHERS
BASIC ELECTRICITY; STUDENT WORKBOOK, INSTRUCTORS GUIDE AND TESTS.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF EDUCATION
OFFICE OF EDUCATION (OHEW), WASHINGTON, D.C.
PUB DATE - ND 21P.

DESCRIPTORS - *AUTOINSTRUCTIONAL AIDS; *ELECTRICITY; *POST TESTING; PRETESTING; WORKBOOKS; TEACHING GUIDES; ACHIEVEMENT TESTS; UNITS OF STUDY (SUBJECT FIELDS); *INDUSTRIAL EDUCATION; ELECTRICAL OCCUPATIONS; *EXPERIMENTAL CURRICULUM

ABSTRACT - THIS SELF-INSTRUCTIONAL UNIT IN BASIC ELECTRICITY IS DESIGNED TO TEACH BASIC KNOWLEDGES BY INVOLVING SENSES OF SIGHT,

HEARING, AND TOUCH IN THE LEARNING PROCESS. RELATED LABORATORY EXERCISES CONSIST OF A SERIES OF TAPE-SLIDE SEQUENCES IN A LINEAR PROGRAMED PATTERN AND A WORKBOOK IN WHICH STUDENTS RESPOND TO THE QUESTIONS AND PROBLEMS. A PRETEST AND TWO POST-TESTS, AND AN INSTRUCTORS GUIDE ARE INCLUDED. THE FINAL REPORT OF THE POLYSENSORY SELF-INSTRUCTIONAL SYSTEM IS AVAILABLE AS ED 021 141 OR VT 005 941 (ARM SPRING 1969). (GR)

VT 007 001

SERGEANT, HAROLD A.
OXY-ACETYLENE WELDING SERIES; INSTRUCTION BOOK 2.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF EDUCATION
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
HOLLYWOOD VALLEY FILM LABORATORIES, INC.,
2704 WEST OLIVE AVENUE, BURBANK, CALIFORNIA 91505 (FILMS).
PUB DATE - 68 123P.

DESCRIPTORS - *PROGRAMED TEXTS; *INDUSTRIAL ARTS; *WELDING; HIGH SCHOOLS; ILLUSTRATIONS; SINGLE CONCEPT FILMS; PROGRAMED INSTRUCTION

ABSTRACT - THIS SCRAMBLED, PROGRAMED TEXT IS FOR USE BY INDUSTRIAL ARTS STUDENTS IN HIGH SCHOOL COURSES. IT WAS DEVELOPED BY THE AUTHOR AND WAS FIELD TESTED IN NINE HIGH SCHOOLS WITH LATER REVISION. ITS CONTENTS COVER MAKING HEADS WITH AND WITHOUT FILLER RODS AND MAKING CORNER JOINT WELDS. THE CONTINUOUS LOOP 8MM FILMS, "BEADS WITHOUT FILLER ROD," "BEADS WITH FILLER RODS," AND "CORNER JOINT WELD" ARE AVAILABLE FROM HOLLYWOOD VALLEY FILM LABORATORIES, INC., 2704 WEST OLIVE AVENUE, BURBANK, CALIFORNIA 91505. AN ANSWER BOOKLET MAY BE OBTAINED FROM THE SOURCE OF AVAILABILITY INDICATED FOR THE DOCUMENT. A COMPANION TEXT (PART 1) IS VT 007 002 (AIM, SPRING, 1969). (EM)

VT 007 002

SERGEANT, HAROLD A.
OXY-ACETYLENE WELDING SERIES; INSTRUCTION BOOK 1.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF EDUCATION
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
HOLLYWOOD VALLEY FILM LABORATORIES, INC.,
2704 WEST OLIVE AVENUE, BURBANK, CALIFORNIA 91505 (FILMS).
PUB DATE - 68 133P.

DESCRIPTORS - *PROGRAMED TEXTS; *INDUSTRIAL ARTS; *WELDING; HIGH SCHOOLS; ILLUSTRATIONS; SINGLE CONCEPT FILMS; PROGRAMED INSTRUCTION

ABSTRACT - THIS SCRAMBLED, PROGRAMED TEXT IS FOR USE BY INDUSTRIAL ARTS STUDENTS IN HIGH SCHOOL COURSES. IT WAS DEVELOPED BY THE AUTHOR AND WAS FIELD TESTED IN NINE HIGH SCHOOLS WITH LATER REVISION. THE CONTENTS COVER THE SAFE USE OF OXYACETYLENE WELDING EQUIPMENT AND LIGHTING AND ADJUSTING THE FLAME. THE CONTINUOUS LOOP 8MM FILMS, "EQUIPMENT AND SAFETY" AND "LIGHTING AND ADJUSTING FLAME" ARE AVAILABLE FROM HOLLYWOOD VALLEY FILM LABORATORY, INC., 2704 WEST OLIVE

AVENUE, BURBANK, CALIFORNIA 91505. AN ANSWER BOOK MAY BE OBTAINED FROM THE SOURCE OF AVAILABILITY INDICATED FOR THE DOCUMENT. A COMPANION TEXT (PART 2) IS VT 007 001 (AIM, SPRING, 1969). (EM)

VT 007 011

ELECTRIC ARC WELDING; STUDENT PERFORMANCE PRE-TEST.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF EDUCATION
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
PUB DATE - ND 8P.

DESCRIPTORS - *PRETESTS; *INDUSTRIAL EDUCATION; *WELDERS; *WELDING; SECONDARY GRADES

ABSTRACT - DEVELOPED BY A SYSTEM DESIGNER, ACADEMIC CONSULTANTS, TEACHERS, AND RESEARCH ASSISTANTS, AND FIELD TESTED IN NINE NORTHWEST SCHOOLS PRIOR TO REVISION AND PUBLICATION, THIS STUDENT PERFORMANCE PRE-TEST IS PART OF A SELF-INSTRUCTIONAL SYSTEM PRODUCED BY THE WASHINGTON STATE UNIVERSITY DEPARTMENT OF EDUCATION FOR USE IN HIGH SCHOOL INDUSTRIAL ARTS CLASSES STUDYING BEGINNING ELECTRIC WELDING. THE PURPOSE OF THE TEST IS TO DETERMINE, PRIOR TO TRAINING, THE STUDENT'S CAPABILITY TO SELECT AND USE THE MATERIALS AND EQUIPMENT INVOLVED IN THE ELECTRIC WELDING COURSE. THE TEST FORMAT CONSISTS OF QUESTIONS AND INSTRUCTIONS TO BE GIVEN BY THE TEACHER, WITH THE APPROPRIATE STUDENT RESPONSES ALSO GIVEN. A LIST OF NECESSARY EQUIPMENT AND SUPPLIES IS PROVIDED. SUPPLEMENTARY MEDIA NECESSARY IN TEACHING WELDING COURSE ARE EIGHT 8-MM FILMS AVAILABLE FROM HOLLYWOOD VALLEY FILM LABORATORIES, INC., 2704 W. OLIVE AVENUE, BURBANK, CALIFORNIA 91505. OTHER DOCUMENTS IN THE SERIES ARE VT 006 985, VT 006 989, VT 006 991, VT 006 992, AND VT 007 360, ALL IN THIS ISSUE. (AW)

VT 007 263

SMITH, REX M.
INDUSTRIAL ARTS IN THE JUNIOR HIGH SCHOOL. A GUIDE FOR SCHOOL ADMINISTRATORS AND TEACHERS.

WEST VIRGINIA STATE DEPT. OF EDUCATION,
CHARLESTON
PUB DATE - APR68 79P.

DESCRIPTORS - *PROGRAM GUIDES; CURRICULUM GUIDES; *INDUSTRIAL ARTS; JUNIOR HIGH SCHOOLS; RESOURCE MATERIALS; EDUCATIONAL FACILITIES; EDUCATIONAL EQUIPMENT

ABSTRACT - THIS PROGRAM GUIDE WAS PREPARED AT THE REQUEST OF THE WEST VIRGINIA BOARD OF EDUCATION UNDER THE DIRECTION OF A COMMITTEE COMPOSED OF THE STATE SUPERVISOR OF INDUSTRIAL ARTS AND COLLEGE DEPARTMENT CHAIRMEN. IT IS FOR USE BY SCHOOL ADMINISTRATORS AND INDUSTRIAL ARTS TEACHERS CONCERNED WITH JUNIOR HIGH PROGRAMS. MAJOR SECTIONS ARE TITLED: (1) A COMPREHENSIVE PROGRAM OF INDUSTRIAL ARTS FOR THE JUNIOR HIGH SCHOOL, (2) OPERATIONAL POLICY, (3) RECOMMENDED STANDARDS FOR INDUSTRIAL ARTS FACILITIES, (4) NATIONAL DEFENSE EDUCATION

TITLE III, (5) MATERIAL FOR THE RESOURCE CENTER, (6) INVENTORY AND SERVICE INDEX, AND (7) SUGGESTED LISTING OF TOOLS AND EQUIPMENT. (EM)

VT 007 308
STUNARO, E. ARTHUR; HARNACK, RICHARD B.
EQUIPMENT, TOOLS AND MATERIALS, AS PROPOSED
BY THE TECHNOLOGY FOR CHILDREN PROJECT.

NEW JERSEY STATE DEPT. OF EDUCATION, TRENTON.
DIV. OF VOCATIONAL EDUCATION
FORD FOUNDATION, NEW YORK, N.Y.
TECHNOLOGY FOR CHILDREN PROJECT, DIVISION OF
VOCATIONAL EDUCATION, NEW JERSEY STATE
DEPARTMENT OF EDUCATION, 225 WEST STATE
STREET, TRENTON, NEW JERSEY 08625.
PUB DATE - JUN68 40P.

DESCRIPTORS - *INDUSTRIAL ARTS; *ELEMENTARY
GRADES; *CLASSROOM FURNITURE; EDUCATIONAL
INNOVATION; INSTITUTES (TRAINING PROGRAMS);
*PREVOCATIONAL EDUCATION; *EDUCATIONAL
EQUIPMENT; INSTRUCTIONAL MATERIALS;
CURRICULUM DEVELOPMENT
IDENTIFIERS - *TECHNOLOGY FOR CHILDREN
PROJECT

ABSTRACT - THE TECHNOLOGY FOR CHILDREN
PROJECT IS DEVISING A CLASSROOM ENVIRONMENT
WHICH ENCOURAGES A CHILD'S EXPLORATORY AND
MANIPULATIVE DRIVES BY INCLUDING A VARIETY OF
MATERIALS AND TOOLS IN THE CLASSROOM. THIS
GUIDE LISTS THE EQUIPMENT, TOOLS, AND
MATERIALS RECOMMENDED FOR USE BY ELEMENTARY
SCHOOL CHILDREN. INCLUDED ARE: (1) A
RECOMMENDED TOOL LIST FOR AN ELEMENTARY
CLASSROOM; (2) PICTURES, BILLS OF MATERIALS
AND WORKING DRAWINGS OF A PORTABLE TOOL
PANEL, WORKBENCH, FOLDING WORK SURFACE, AND A
SAW HORSE; AND (3) MATERIAL DESCRIPTION AND
LISTING. A DESCRIPTION IS INCLUDED OF THE
SUMMER INSTITUTES WHICH HAVE BEEN CONDUCTED
IN NEW JERSEY TO IMPLEMENT AND TEST THE
THEORY OF THE TECHNOLOGY FOR CHILDREN
PROJECT. (GR)

VT 007 334
JAHNKE, L.P.
FABRICATION TECHNIQUES FOR TURBINE
COMPONENTS.

GENERAL ELECTRIC CO., CINCINNATI, OHIO.
FLIGHT PROPULSION DIV.
PUB DATE - 66 28P. PAPER PRESENTED AT
ADVISORY GROUP FOR AEROSPACE RESEARCH AND
DEVELOPMENT PROPULSION AND ENERGETICS MEETING
(27TH, PARIS, APRIL 4-7, 1966).

DESCRIPTORS - *RESOURCE MATERIALS;
*INDUSTRIAL ARTS; *PRODUCTION TECHNIQUES;
*WELDING; METALS; *AEROSPACE TECHNOLOGY

ABSTRACT - BRIEF DESCRIPTIONS ARE PROVIDED
FOR 10 FABRICATING TECHNIQUES WHICH ARE
CURRENTLY USED TO PRODUCE JET ENGINE
COMPONENTS. THESE TECHNIQUES ARE: (1)
ELECTROFORMING, (2) POWDER METAL SLIP
CASTING, (3) PRECISION VACUUM CASTING, (4)
CHEMICAL MILLING, (5) ELECTRO-CHEMICAL
MACHINING, (6) ROLL FORMING, (7) FLAME AND
PLASMA SPRAYING, (8) HIGH TEMPERATURE
NG, (9) PROGRAMED INERT GAS MULTI-

ELECTRODE WELDING, AND (10) ELECTRON BEAM
WELDING. FORTY PHOTOGRAPHS ILLUSTRATE THESE
TECHNIQUES. (EM)

VT 007 360
SERGEANT, HAROLD A.
ELECTRIC ARC WELDING. INSTRUCTION BOOK.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF
EDUCATION
NORTHWEST REGIONAL EDUCATIONAL LAB.,
PORTLAND, OREG.
PUB DATE - NO 123P.

DESCRIPTORS - *PROGRAMED TEXTS; *INDUSTRIAL
EDUCATION; *WELDERS; *WELDING; SECONDARY
GRADES

ABSTRACT - DEVELOPED BY A SYSTEMS DESIGNER
WITH ACADEMIC CONSULTANTS, TEACHERS, AND
RESEARCH ASSISTANTS AND FIELD TESTED IN NINE
NORTHWEST SCHOOLS PRIOR TO REVISION AND
PUBLICATION, THIS PROGRAMED TEXT IS PART OF A
SELF-INSTRUCTIONAL SYSTEM PRODUCED BY THE
WASHINGTON STATE UNIVERSITY DEPARTMENT OF
EDUCATION FOR USE BY HIGH SCHOOL INDUSTRIAL
ARTS STUDENTS IN BEGINNING ELECTRIC WELDING
COURSES. THE PROGRAM'S FORMAT INCLUDED A
STATEMENT OF FACT FOLLOWED BY A "COMPLETE THE
SENTENCE" EXERCISE. THE EXERCISE FOLLOWS THE
FACT IMMEDIATELY WITH NO PROVISION FOR
MASKING; ANSWERS ARE GIVEN ON THE FOLLOWING
PAGE. THE TEXT IS KEYED TO FOUR 8-MM FILMS
AND PRACTICE EXERCISES DEALING WITH SAFETY
AND THE PROCESSES OF RUNNING A BEAD, STRIKING
AN ARC, AND MAKING A FILLET WELD. THE FILMS,
TITLED "EQUIPMENT AND SAFETY," "RUNNING A
BEAD," "STRIKING AN ARC," AND "FILLET WELD,"
ARE AVAILABLE FROM HOLLYWOOD FILM
LABORATORIES, INC., 2704 W. OLIVE AVENUE,
BURBANK, CALIFORNIA 91505. OTHER DOCUMENTS IN
THE SERIES ARE VT 006 985, VT 006 989, VT 006
991, VT 006 992, AND VT 007 011, ALL IN THIS
ISSUE. (AW)

VT 007 363
WARFIELD, C.H.
TEACHING AIDS IN ELECTRICITY. WORK SHOP.

AMERICAN SOCIETY OF RADIOLOGIC TECHNOLOGISTS,
FOND DU LAC, WIS.
AMERICAN SOCIETY OF RADIOLOGIC TECHNOLOGISTS,
537 SOUTH MAIN STREET, FOND DU LAC, WISCONSIN
54935 (\$1.15).
PUB DATE - NO 38P.

DESCRIPTORS - *INSTRUCTIONAL MATERIALS;
INDUSTRIAL ARTS; *ELECTRICITY; *EDUCATIONAL
EXPERIMENTS; LABORATORY EXPERIMENTS;
*DEMONSTRATIONS (EDUCATIONAL); LABORATORY
PROCEDURES; MAGNETS; ELECTRIC CIRCUITS

ABSTRACT - THIS RESOURCE UNIT IS FOR TEACHER
USE IN PLANNING AND CONDUCTING COMMON
EXPERIMENTS AND DEMONSTRATIONS OF ELECTRICITY
TO ENABLE STUDENTS TO BETTER UNDERSTAND SOME
OF THE FUNDAMENTALS OF ELECTRICITY. THE
EXPERIMENTS HAVE BEEN TAKEN FROM STANDARD
TREATISES ON ELECTRICITY, AND A LIST OF
APPARATUS NEEDED, WHERE IT CAN BE OBTAINED,
AND, IN SOME CASES, APPROXIMATE COSTS ARE
INCLUDED FOR EACH EXPERIMENT. THE DOCUMENT IS
ILLUSTRATED WITH LINE DRAWINGS. A LIST OF

REFERENCES IS APPENDED. (GR)

VT 007 384

HEDGES, CHARLES S.; WOMACK, R.C.
FLUID POWER IN PLANT AND FIELD. VOLUME 1.

WOMACK MACHINE SUPPLY CO., DALLAS, TEX.
WOMACK MACHINE SUPPLY COMPANY, P.O. BOX
35027, DALLAS, TEXAS 75235 (\$5.85).
PUB DATE - 68 174P.

DESCRIPTORS - *SUPPLEMENTARY TEXTBOOKS;
*TRADE AND INDUSTRIAL EDUCATION; *FLUID POWER
EDUCATION; *FLUID POWER; EQUIPMENT
MAINTENANCE; EQUIPMENT UTILIZATION;
*KINETICS; SECONDARY EDUCATION; ADULT
VOCATIONAL EDUCATION

ABSTRACT - THIS SUPPLEMENTARY TEXT IS FOR
STUDENT OR TEACHER USE IN INDUSTRIAL OR
VOCATIONAL CLASSES. IT CONTAINS TIPS,
SUGGESTIONS, AND IDEAS FOR IMPROVING FLUID
POWER EQUIPMENT PERFORMANCE, PREVENTING
PREMATURE FAILURES, AND CORRECTING
MALFUNCTIONS OR BREAKDOWNS. CHAPTER HEADINGS
ARE: (1) AIR AND HYDRAULIC CYLINDERS, (2) AIR
AND HYDRAULIC VALVES, (3) HYDRAULIC PUMPS AND
MOTORS, (4) HYDRAULIC OIL RESERVOIRS, (5)
ACCUMULATORS, (6) HEAT EXCHANGERS FOR OIL
COOLING, (7) AIR LINE FILTERS, REGULATORS,
AND LUBRICATORS, (8) DRYERS FOR COMPRESSED
AIR, AND (9) VACUUM PUMPS, VALVES, AND
CYLINDERS. NUMEROUS LINE DRAWINGS ARE
PROVIDED IN EACH CHAPTER AND NINE CHARTS AND
TABLES PROVIDE REFERENCE DATA. VOLUME 2 IS IN
PROGRESS. RELATED DOCUMENTS ARE VT 007 439-VT
007 441 (BOTH IN THIS ISSUE). (EM)

VT 007 388

HARNACK, RICHARD B.
TECHNOLOGY FOR CHILDREN PROJECT. RECOMMENDED
PROCEDURES FOR SAFETY AND USE OF HAND TOOLS
IN THE ELEMENTARY CLASSROOM.

NEW JERSEY DEPT. OF EDUCATION, TRENTON. DIV.
OF VOCATIONAL EDUCATION
PUB DATE - ND 17P.

DESCRIPTORS - *GUIDELINES; *SCHOOL SAFETY;
*INDUSTRIAL ARTS; *ELEMENTARY GRADES; *HAND
TOOLS; SAFETY EDUCATION; ACCIDENT PREVENTION
IDENTIFIERS - *PROJECT TECHNOLOGY FOR
CHILDREN

ABSTRACT - THIS MANUAL WAS DEVELOPED FOR USE
BY TEACHERS IN THE TECHNOLOGY FOR CHILDREN
PROJECT. IT WAS PREPARED BY THE AUTHOR AND IS
CONSIDERED TO BE A GUIDE TO THE SAFE USE OF
EQUIPMENT AND MATERIALS IN AN ELEMENTARY
EDUCATION ACTIVITY PROGRAM FOCUSING ON
INDUSTRIAL OR TECHNOLOGICAL EQUIPMENT,
PROCESSES, AND MATERIALS. IT PROVIDES
GUIDELINES RELATIVE TO GENERAL SAFETY AND
SAFE USE OF HAND TOOLS, POWER TOOLS,
MATERIALS, AND ELECTRICITY. (EM)

VT 007 439

HEDGES, CHARLES S.
INDUSTRIAL FLUID POWER. VOLUME 1.

WOMACK MACHINE SUPPLY CO., DALLAS, TEX.
WOMACK MACHINE SUPPLY COMPANY, P.O. BOX

35027, DALLAS, TEXAS 75235 (\$5.95).
PUB DATE - 65 184P.

DESCRIPTORS - *TEXTBOOKS; *INDUSTRIAL
EDUCATION; *FLUID POWER; SECONDARY GRADES;
ADULT VOCATIONAL EDUCATION

ABSTRACT - THIS TEXT, WRITTEN BY AN ENGINEER
AND A TECHNICAL STAFF, IS FIRST IN A SERIES
OF THREE FOR STUDENT AND TEACHER USE IN
INDUSTRIAL ARTS, VOCATIONAL, OR ADULT COURSES
TREATING FLUID POWER. PRINCIPLES OF FLUID
POWER TRANSMISSION AND THE COMMON COMPONENTS
SUCH AS PUMPS, VALVES, AND CYLINDERS ARE
TREATED. CHAPTERS, EACH ILLUSTRATED WITH
NUMEROUS LINE DRAWINGS, ARE: (1) FUNDAMENTALS
OF FLUID POWER, (2) CYLINDERS, (3) 2 AND 3-
WAY VALVES, (4) 4 AND 5-WAY VALVES, (5)
PUMPS, AND (6) ACCESSORIES. SUPPLEMENTARY
MATERIALS INCLUDE A GLOSSARY, 120 REVIEW
QUESTIONS AND ANSWERS, AND USA STANDARDS
INSTITUTE SYMBOLS. A SET OF COLOR SLIDES
BASED ON THE TEXT'S ILLUSTRATIONS IS
AVAILABLE FROM THE PUBLISHER. VOLUME 2 AND 3
OF THIS SERIES ARE AVAILABLE AS VT 007 440
AND VT 007 441, RESPECTIVELY, AND A RELATED
DOCUMENT, "FLUID POWER IN PLANT AND FIELD,
VOLUME 1," IS AVAILABLE AS VT 007 384, ALL IN
THIS ISSUE. (EM)

VT 007 440

HEDGES, CHARLES S.
INDUSTRIAL FLUID POWER. VOLUME 2.

WOMACK MACHINE SUPPLY CO., DALLAS, TEX.
WOMACK MACHINE SUPPLY COMPANY, P.O. BOX
35027, DALLAS, TEXAS 75235 (\$5.25).
PUB DATE - 66 144P.

DESCRIPTORS - *TEXTBOOKS; *INDUSTRIAL
EDUCATION; *FLUID POWER; SECONDARY GRADES;
ADULT VOCATIONAL EDUCATION

ABSTRACT - THIS TEXT, WRITTEN BY AN ENGINEER
AND A TECHNICAL STAFF, IS THE SECOND IN A
SERIES OF THREE FOR STUDENT AND TEACHER USE
IN INDUSTRIAL ARTS, VOCATIONAL OR ADULT
COURSES TREATING FLUID POWER. THE USE AND
CONTROL OF AIR AND HYDRAULIC CYLINDERS ARE
COVERED IN THESE CHAPTERS: (1) APPLICATION
IDEAS FOR CYLINDERS, (2) BASIC AIR CIRCUITS,
(3) BASIC HYDRAULIC CIRCUITS, AND (4)
COMBINATION AIR/OIL CIRCUITS. EACH CHAPTER
HAS NUMEROUS LINE DRAWINGS, AND A SET OF
COLOR SLIDES BASED ON THESE ILLUSTRATIONS IS
AVAILABLE. SUPPLEMENTARY MATERIALS INCLUDE
TABLES OF CYLINDER SPEED AND FORCE AND USA
STANDARDS INSTITUTE SYMBOLS. VOLUME 1 AND 3
OF THIS SERIES ARE AVAILABLE AS VT 007 439
AND VT 007 441, RESPECTIVELY, AND A RELATED
DOCUMENT, "FLUID POWER IN PLANT AND FIELD,
VOLUME 1," IS AVAILABLE AS VT 007 384, ALL IN
THIS ISSUE. (EM)

VT 007 441

HEDGES, CHARLES S.
INDUSTRIAL FLUID POWER. VOLUME 3.

WOMACK MACHINE SUPPLY CO., DALLAS, TEX.
WOMACK MACHINE SUPPLY COMPANY, P.O. BOX
35027, DALLAS, TEXAS 75235 (\$5.90).
PUB DATE - 68 170P.

DESCRIPTORS - *TEXTBOOKS; *INDUSTRIAL EDUCATION; *FLUID POWER; SECONDARY GRADES; ADULT VOCATIONAL EDUCATION

ABSTRACT - THIS TEXT, WRITTEN BY AN ENGINEER AND A TECHNICAL STAFF, IS THE LAST IN A SERIES OF THREE FOR STUDENT AND TEACHER USE IN INDUSTRIAL ARTS, VOCATIONAL, OR ADULT COURSES TREATING FLUID POWER. CHAPTERS, ILLUSTRATED WITH NUMEROUS LINE DRAWINGS AND CONTAINING REVIEW QUESTIONS, ARE: (1) INTRODUCTION TO FLUID MOTORS, (2) REVIEW OF THRUST, TORQUE, AND POWER, (3) SELECTION OF HYDRAULIC MOTORS, (4) ELECTRIC AND HYDRAULIC MOTORS COMPARED, (5) DIRECTIONAL CONTROL OF HYDRAULIC MOTORS, (6) SPEED CONTROL OF HYDRAULIC MOTORS, (7) CLOSED LOOP HYDRAULIC SYSTEMS, (8) INSTALLATION OF HYDRAULIC MOTORS, (9) AIR MOTORS, (10) ROTARY ACTUATORS, AND (11) PRESSURE INTENSIFIERS. SUPPLEMENTARY MATERIALS INCLUDE CONVERSION TABLES FOR UNITS OF MEASURE, PIPE CAPACITY, AND USA STANDARDS INSTITUTE SYMBOLS. VOLUME 1 AND 2 OF THIS SERIES ARE AVAILABLE AS VT 007 439, AND VT 007 440, RESPECTIVELY, AND A RELATED DOCUMENT, "FLUID POWER IN PLANT AND FIELD, VOLUME 1," IS AVAILABLE AS VT 007 384, ALL IN THIS ISSUE. A TEACHER'S MANUAL NOW BEING PREPARED FOR THIS TEXT MAY BE OBTAINED FROM THE ABOVE ADDRESS FOR \$1.50. (EM)

VT 007 439 ED 024 822

HOOTS, WILLIAM R.

THE DEVELOPMENT OF A COURSE OF STUDY FOR INDUSTRIAL ARTS EDUCATION AT THE ELEMENTARY SCHOOL LEVEL. RESEARCH REPORT.

OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
OEG-3-8-080023-0019 24
BR-8-C-023

PUB DATE - AUG68 111P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; TEXTBOOK CONTENT; CONTENT ANALYSIS; *CURRICULUM DEVELOPMENT; ELEMENTARY GRADES; BIBLIOGRAPHIES; *ELEMENTARY SCHOOL CURRICULUM IDENTIFIERS - NORTH CAROLINA

ABSTRACT - THE DEVELOPMENT OF A COURSE OF STUDY FOR INDUSTRIAL ARTS IN GRADES ONE THROUGH EIGHT, WHICH WAS BASED ON MATERIAL PRESENTED ON STATE ADOPTED BASAL TEXTBOOKS, WAS THE PURPOSE OF THIS PROJECT. INSTRUCTION RESULTING FROM THE COURSE OF STUDY WAS TO SERVE SIX FUNCTIONS: SOCIAL, CULTURAL, CONSUMER, RECREATIONAL, OCCUPATIONAL, AND TECHNICAL. SPECIFIC PROJECT OBJECTIVES WERE TO EXTRACT AND ORGANIZE MATERIAL FROM THE TEXTS AND TO DEVELOP A COURSE OF STUDY KEYED TO TEXTS AND SUGGESTED REFERENCE MATERIALS. TOPICS KEYED TO THESE BOOKS WERE ORGANIZED UNDER SIX HEADINGS FOR EACH GRADE: (1) COMMUNICATION, (2) CONSTRUCTION, (3) MANUFACTURING, (4) TRANSPORTATION, (5) POWER, AND (6) SERVICE. FOLLOWING THIS A COURSE OUTLINE WAS DEVELOPED FOR EACH GRADE FROM THESE TOPICS, IF THEY MET FIVE STATED CRITERIA. THE OUTLINES INCLUDE TEXT AND REFERENCE KEYS AND SUGGESTED ACTIVITIES FOR EACH TOPIC. THE BIBLIOGRAPHY LISTS 84 TEXTBOOKS AND 48 SUPPLEMENTARY REFERENCES. (EM)

VT 007 464

INDUSTRIAL ARTS ENRICHMENT EXPERIENCES IN THE ELEMENTARY SCHOOL. GRADES FIVE AND SIX. CURRICULUM BULLETIN 173.

KANSAS CITY PUBLIC SCHOOLS, MO.
BUSINESS SERVICES DIVISION, 601 BOARD OF EDUCATION BUILDING, 1211 MCGEE, KANSAS CITY, MISSOURI 64106 (\$2.00).
PUB DATE - JAN68 149P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *CURRICULUM ENRICHMENT; SCIENCES; MATHEMATICS; SOCIAL STUDIES; ART; HEALTH; GRADE 5; GRADE 6; INSTRUCTIONAL AIDS; STUDENT PROJECTS

ABSTRACT - DEVELOPED AS A 160-HOUR COURSE BY A CURRICULUM DIRECTOR AND A COMMITTEE OF TEACHERS AND CONSULTANTS, THIS CURRICULUM GUIDE IS FOR USE BY INDUSTRIAL ARTS AND ELEMENTARY TEACHERS IN GRADES 5 AND 6. THE MAJOR UNITS ARE: (1) SCIENCE AND THE INDUSTRIAL ARTS, (2) ELEMENTARY MATHEMATICS AND THE INDUSTRIAL ARTS, (3) SOCIAL STUDIES AND THE INDUSTRIAL ARTS, (4) ART AND THE INDUSTRIAL ARTS, AND (5) HEALTH AND THE INDUSTRIAL ARTS. EACH UNIT INCLUDES OBJECTIVES, SUGGESTED PROJECTS, REQUIRED MATERIALS, AND A CONTENT OUTLINE. SUPPLEMENTARY MATERIALS INCLUDE LISTS OF TEACHING AIDS, TOOLS, MATERIALS, AND REFERENCES. THE DOCUMENT IS ILLUSTRATED WITH PHOTOGRAPHS AND LINE DRAWINGS. (EM)

VT 007 685 ED 028 259

ARIZONA INDUSTRIAL ARTS: ELECTRICITY ELECTRONICS. A CURRICULUM GUIDE FOR INTERMEDIATE AND SECONDARY LEVEL PROGRAMS.

ARIZONA STATE DEPT. OF PUBLIC INSTRUCTION,
PHOENIX. DEPT. OF VOCATIONAL EDUCATION
PUB DATE - 67 55P.

DESCRIPTORS - *STATE CURRICULUM GUIDES; *INDUSTRIAL ARTS; *ELECTRICITY; *ELECTRONICS; SECONDARY GRADES; INTERMEDIATE GRADES; INSTRUCTIONAL AIDS

ABSTRACT - THIS CURRICULUM GUIDE IS FOR USE BY TEACHERS AND ITS PURPOSES ARE: (1) TO DESCRIBE THE PURPOSE AND CONTENT OF ELECTRICITY-ELECTRONICS COURSES, (2) TO PROVIDE A SUGGESTED COURSE OUTLINE WITH STUDENT AND TEACHER ACTIVITIES AND INSTRUCTIONAL AIDS, (3) TO PROMOTE COORDINATION BETWEEN INTERMEDIATE AND SECONDARY PROGRAMS IN ARIZONA, AND (4) TO SUGGEST A FOUNDATION CURRICULUM FOR TRADE AND INDUSTRIAL EDUCATION, TECHNICAL EDUCATION, AND ENGINEERING. IT WAS DEVELOPED BY A LARGE GROUP OF TEACHERS IN A SERIES OF MEETINGS WHICH WAS COORDINATED BY THE STATE SUPERVISORS. "EXPLORING ELECTRICITY-ELECTRONICS" IS A 45-HOUR UNIT AND "GENERAL ELECTRICITY-ELECTRONICS," "ELECTRONICS," AND "ADVANCED ELECTRONICS" ARE 180-HOUR COURSES. FOR EACH OF THESE OBJECTIVES ARE GIVEN, AND COURSE CONTENT, STUDENT ACTIVITIES, TEACHER ACTIVITIES, AND INSTRUCTIONAL AIDS ARE ORGANIZED IN PARALLEL COLUMNS FOR EACH TOPIC. SUPPLEMENTARY MATERIALS INCLUDE SAFETY RULES, VISUAL AID BIBLIOGRAPHY, AND A REFERENCE BIBLIOGRAPHY. (EM)

VT 007 689
INDUSTRIAL ARTS; ELECTRICITY-ELECTRONICS.

UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
SALT LAKE CITY
UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
1300 UNIVERSITY CLUB BUILDING, 136 EAST SOUTH
TEMPLE, SALT LAKE CITY, UTAH 84111 (\$1.00).
PUB DATE - 66 67P.

DESCRIPTORS - *STATE CURRICULUM GUIDES;
*INDUSTRIAL ARTS; *ELECTRICITY; *ELECTRONICS;
SECONDARY GRADES; INSTRUCTIONAL AIDS;
EDUCATIONAL EQUIPMENT; UNITS OF STUDY
(SUBJECT FIELDS)
IDENTIFIERS - UTAH

ABSTRACT - THIS CURRICULUM GUIDE IS ONE OF
SEVERAL DEVELOPED TO PROVIDE ADMINISTRATORS
AND INDUSTRIAL ARTS TEACHERS WITH THE STATE-
ADOPTED CURRICULUM FOR ELECTRICITY-
ELECTRONICS. IT WAS PREPARED BY A COMMITTEE
UNDER THE DIRECTION OF A STATE SUPERVISOR.
COURSE OUTLINES ARE GIVEN FOR A 9-WEEK AND AN
18-WEEK JUNIOR-HIGH COURSE AND FOR THREE 36-
WEEK SENIOR-HIGH COURSES. INCLUDED FOR EACH
COURSE ARE GENERAL OBJECTIVES, TOPICAL
OUTLINES, TIME ALLOTMENTS, AND INSTRUCTIONAL
AIDS AND ACTIVITIES. LISTS OF FILMS, BOOKS,
AND EQUIPMENT ARE GIVEN. (EM)

VT 007 730
INDUSTRIAL ARTS; A STUDY OF INDUSTRIAL
TECHNOLOGY. INTERIM BULLETIN.

FLORIDA STATE DEPT. OF EDUCATION, TALLAHASSEE
PUB DATE - AUG68 67P.

DESCRIPTORS - *PROGRAM GUIDES; *CURRICULUM
GUIDES; *INDUSTRIAL ARTS; ELEMENTARY GRADES;
SECONDARY GRADES
IDENTIFIERS - FLORIDA

ABSTRACT - ORGANIZED AROUND INDUSTRIAL AND
TECHNOLOGICAL CONCEPTS OF COMMUNICATION,
CONSTRUCTION, MANUFACTURING, AND POWER, THIS
PROGRAM GUIDE, DEVELOPED BY SUPERVISORS AND
TEACHER EDUCATORS, IS FOR ADMINISTRATORS,
SUPERVISORS, TEACHER EDUCATORS, AND TEACHERS.
IT PROVIDES AN OVERVIEW OF INDUSTRIAL ARTS
FOR GRADES K-12 ORGANIZED AT THREE LEVELS:
LOWER GRADES, MIDDLE GRADES, AND UPPER
GRADES. MAJOR SECTIONS FOR EACH LEVEL ARE:
(1) PHILOSOPHY, (2) GOALS, (3) BEHAVIORAL
OBJECTIVES, (4) THE PROGRAM, (5) FACILITIES,
(6) SUGGESTED COURSES, AND (7)
IMPLEMENTATION. (EM)

VT 007 779
BEGINNING LEATHERCRAFT PROJECTS FOR THE
INDUSTRIAL ARTS.

DENVER PUBLIC SCHOOLS, COLO. DEPT. OF GENERAL
CURRICULUM SERVICES
DENVER PUBLIC SCHOOLS, ROOM 307, 414 14TH
STREET, DENVER, COLORADO 80202 (\$1.25).
PUB DATE - 65 81P.

DESCRIPTORS - *SUPPLEMENTARY TEXTBOOKS;
*INDUSTRIAL ARTS; *HANDICRAFTS; *STUDENT
PROJECTS; *LEATHER

ABSTRACT - THIS PROJECT BOOK IS FOR STUDENT

AND TEACHER USE IN INDUSTRIAL ARTS CRAFTS
COURSES. IT WAS DEVELOPED BY A COMMITTEE OF
TEACHERS. ILLUSTRATIONS, PLANS, MATERIAL
LISTS, PROCEDURAL LISTS, AND REFERENCES ARE
GIVEN FOR 30 SIMPLE LEATHER PROJECTS. LINE
DRAWINGS AND PHOTOGRAPHS ILLUSTRATE THE TEXT.
A SIMILAR PUBLICATION FOR INTERMEDIATES WHICH
CONTAINS 35 MORE DIFFICULT PROJECTS IS
AVAILABLE AS VT 007 780. (EM)

VT 007 780
INTERMEDIATE LEATHERCRAFT PROJECTS FOR THE
INDUSTRIAL ARTS.

DENVER PUBLIC SCHOOLS, COLO. DEPT. OF GENERAL
CURRICULUM SERVICES
DENVER PUBLIC SCHOOLS, ROOM 307, 414 14TH
STREET, DENVER, COLORADO 80202 (\$1.50).
PUB DATE - 65 115P.

DESCRIPTORS - *SUPPLEMENTARY TEXTBOOKS;
*INDUSTRIAL ARTS; *LEATHER; *HANDICRAFTS;
*STUDENT PROJECTS

ABSTRACT - THIS PROJECT BOOK IS FOR STUDENT
AND TEACHER USE IN INDUSTRIAL ARTS CRAFTS
COURSES. IT WAS DEVELOPED BY A COMMITTEE OF
TEACHERS. ILLUSTRATIONS, PLANS, MATERIAL
LISTS, PROCEDURAL LISTS, AND REFERENCES ARE
GIVEN FOR 35 INTERMEDIATE LEATHER PROJECTS.
LINE DRAWINGS AND PHOTOGRAPHS ILLUSTRATE THE
TEXT. A SIMILAR PUBLICATION FOR BEGINNERS
WHICH CONTAINS 30 SIMPLE LEATHER PROJECTS IS
AVAILABLE AS VT 007 779. (EM)

VT 007 807
HOW TO USE TAPS, DIES AND HIGH SPEED STEEL
DRILLS.

HANSON (HENRY L.) CO., INC., WORCESTER, MASS.
HENRY L. HANSON, CO., INC., 25 UNION STREET,
WORCESTER, MASSACHUSETTS 01608 (WITHOUT
CHARGE).
PUB DATE - 68 16P.

DESCRIPTORS - *RESOURCE MATERIALS;
*INDUSTRIAL ARTS; *HAND TOOLS; EQUIPMENT
UTILIZATION
IDENTIFIERS - *THREADING

ABSTRACT - THIS BOOKLET WAS DEVELOPED BY A
MANUFACTURER TO PROVIDE BASIC INFORMATION ON
THREADING TAPS AND DIES AND TWIST DRILLS. IT
IS FOR USE BY STUDENTS OR TEACHERS IN
APPROPRIATE COURSES DEALING WITH METAL WORK.
DIRECTIONS FOR PROPER USE, NOMENCLATURE, AND
DESCRIPTIVE INFORMATION ARE GIVEN. ALSO
INCLUDED ARE TAP DRILL SIZE CHARTS. THE
BOOKLET IS 5" X 8" AND IS ILLUSTRATED. (EM)

VT 007 844 ED 031 554
UNITS FOR THE LABORATORY OF INDUSTRIES.

GORHAM STATE COLL., MAINE
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
PUB DATE - AUG68 486P. MATERIALS DEVELOPED
AT AN NDEA INSTITUTE (GORHAM, MAINE, JULY 1-
AUGUST 9, 1968).

DESCRIPTORS - *UNITS OF STUDY (SUBJECT
FIELDS); *MANUFACTURING INDUSTRY; *INDUSTRIAL
ARTS; *LESSON PLANS; *SECONDARY GRADES;

SUMMER INSTITUTES; CURRICULUM DEVELOPMENT; INSTRUCTIONAL MATERIALS; UNIT PLAN; TEACHING GUIDES; RESOURCE MATERIALS; EDUCATIONAL FACILITIES; RECORDS (FORMS); TRANSPARENCIES; TESTS; LEARNING ACTIVITIES; INDUSTRIAL STRUCTURE
IDENTIFIERS - *NATIONAL DEFENSE EDUCATION ACT TITLE XI INSTITUTE; NDEA TITLE XI INSTITUTE

ABSTRACT - THIS INSTITUTE FOCUSED ON MANUFACTURING INDUSTRIES FOR JUNIOR HIGH INDUSTRIAL ARTS. IT WAS ATTENDED BY 20 TEACHERS FROM 14 STATES WHO WORKED IN FOUR GROUPS TO DEVELOP PAIRS OF INSTRUCTIONAL UNITS TITLED "INTRODUCTION TO TECHNOLOGY AND INDUSTRIAL ARTS." EACH OF THESE UNITS COVERS PERSONNEL MANAGEMENT, ENGINEERING, PRODUCTION, FINANCE, AND MARKETING AND WAS TO BE SUITABLE FOR A "LABORATORY OF INDUSTRIES" APPROACH. INCLUDED WERE PURPOSES, PUPIL ACTIVITIES, SUGGESTED CONTENT, AND AN EVALUATION UNIT. THESE UNITS WERE TESTED ON 60 BOYS AND GIRLS AND VIDEO TAPES WERE MADE AND EVALUATED BY THE PARTICIPANTS. (EM)

VT 007 850 ED 028 266
GUIDES IN CONSTRUCTION AND MANUFACTURING FOR ELEMENTARY SCHOOL INDUSTRIAL ARTS. K-2; 3-4; 5-6 .

OHIO STATE UNIV., COLUMBUS
PUB DATE - 68 254P. MATERIALS DEVELOPED AT NDEA INST. FOR ADVANCED STUDY IN ELEMENTARY INDUSTRIAL ARTS (COLUMBUS, SUMMER 1968).

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *CONSTRUCTION; *MANUFACTURING; KINDERGARTEN; *ELEMENTARY GRADES; LESSON PLANS
IDENTIFIERS - *NATIONAL DEFENSE EDUCATION ACT TITLE XI INSTITUTE; NDEA TITLE XI INSTITUTE

ABSTRACT - THIS SERIES OF THREE GUIDES WAS DEVELOPED BY 25 PARTICIPANTS IN THE INSTITUTE. ONE HUNDRED AND EIGHT INDUSTRIAL ARTS LESSON PLANS FOR GRADES K-6 ARE INCLUDED IN THESE GUIDES FOR CONSTRUCTION AND FOR MANUFACTURING INTENDED TO REFLECT THE CONTEMPORARY INDUSTRIAL AND TECHNOLOGICAL SOCIETY IN WHICH YOUNG CHILDREN LIVE. SOME TYPICAL CONSTRUCTION LESSONS ARE: (1) MAN AND TECHNOLOGY, (2) SELECTING A SITE, (3) LISTING MATERIALS, (4) CLEARING THE SITE AND GETTING READY TO BUILD, (5) ERECTING STEEL FRAMES, (6) MEDIATION, ARBITRATION, AND STRIKING, AND (7) MAINTAINING PROPERTY. SOME TYPICAL MANUFACTURING LESSONS ARE (1) MANUFACTURING AND THE ECONOMIC SYSTEM, (2) IDENTIFYING CONSUMER DEMAND, (3) DESIGNING POWER ELEMENTS, (4) OPERATING QUALITY CONTROL SYSTEMS, (5) ESTABLISHING ACCIDENT PREVENTION PROGRAMS, (6) HOT AND COLD WORKING PROCESSES, AND (7) SERVICING MANUFACTURED PRODUCTS. EACH LESSON INCLUDES OBJECTIVES, ACTIVITIES, TEACHING PROCEDURE, RELATIONSHIPS TO OTHER SUBJECTS, MATERIALS REQUIRED, AND A BIBLIOGRAPHY. (EM)

VT 007 853 ED 031 555
WOODWORKING TECHNOLOGY.

SAN DIEGO STATE COLL., CALIF. INDUSTRIAL ARTS

DEPT.
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
PUB DATE - AUG68 262P. MATERIALS DEVELOPED AT NDEA INST. FOR ADVANCED STUDY IN INDUSTRIAL ARTS (SAN DIEGO, JUNE 24-AUGUST 2, 1968).

DESCRIPTORS - *UNITS OF STUDY (SUBJECT FIELDS); *RESOURCE UNITS; *INDUSTRIAL ARTS; *WOODWORKING; LESSON PLANS; RESOURCE MATERIALS; LUMBER INDUSTRY; CURRICULUM DEVELOPMENT; INSTRUCTIONAL MATERIALS; SUMMER INSTITUTES; TEACHING GUIDES; LEARNING ACTIVITIES
IDENTIFIERS - *NATIONAL DEFENSE EDUCATION ACT TITLE XI INSTITUTE; NDEA TITLE XI INSTITUTE; WOODWORKING TECHNOLOGY

ABSTRACT - SIX TEACHING UNITS WHICH WERE DEVELOPED BY THE 24 INSTITUTE PARTICIPANTS ARE GIVEN. "WOOD IDENTIFICATION AND CHEMISTRY" COVERS THE PHYSICAL PROPERTIES AND STRUCTURAL FEATURES OF HARDWOODS AND SOFTWOODS. "SEASONING" EXPLAINS AIR DRYING, KILN DRYING, AND SEVEN SPECIAL LUMBER SEASONING PROCESSES. "RESEARCH ON LAMINATES" DESCRIBES THE BENDING OF SOLID WOOD AND WOOD LAMINATES, BEAM LAMINATION, LAMINATION ADHESIVES, AND PLASTIC LAMINATES. "PARTICLEBOARD: A TEACHING UNIT" EXPLAINS PARTICLEBOARD MANUFACTURING AND THE SEVERAL CLASSES OF PARTICLEBOARD AND THEIR USES. "LUMBER MERCHANDISING" OUTLINES LUMBER GRADES AND SOME WOOD BYPRODUCTS. "A TEACHING UNIT IN PHYSICAL TESTING OF JOINTS, FINISHES, ADHESIVES, AND FASTENERS" DESCRIBES TESTS OF FOUR COMMON EDGE JOINTS, FINISHES, WOOD ADHESIVES, AND WOOD SCREWS. EACH OF THESE UNITS INCLUDES A BIBLIOGRAPHY, GLOSSARY, AND STUDENT EXERCISES. (EM)

VT 007 857 ED 031 556
LAMINATING AND BENDING; A BASE SYLLABUS ON WOOD TECHNOLOGY.

EASTERN KENTUCKY UNIV., RICHMOND
PUB DATE - AUG68 63P. FROM NDEA INST. ON WOOD TECHNOLOGY (EASTERN KENTUCKY UNIV., JUNE 19-AUG. 2, 1968).

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *WOODWORKING; TEACHER EDUCATION; SUMMER INSTITUTES; *RESOURCE MATERIALS; MANUFACTURING; LUMBER INDUSTRY; TEACHER DEVELOPED MATERIALS; CURRICULUM DEVELOPMENT; INSTRUCTIONAL IMPROVEMENT
IDENTIFIERS - *NATIONAL DEFENSE EDUCATION ACT TITLE XI INSTITUTE; NDEA TITLE XI INSTITUTE

ABSTRACT - PREPARED BY PARTICIPANTS IN THE 1968 NATIONAL DEFENSE EDUCATION ACT INSTITUTE ON WOOD TECHNOLOGY, THIS SYLLABUS IS ONE OF A SERIES OF BASIC OUTLINES DESIGNED TO AID COLLEGE LEVEL INDUSTRIAL ARTS WOODWORKING INSTRUCTORS IN IMPROVING AND BROADENING THE SCOPE AND CONTENT OF THEIR PROGRAMS. THE MANUAL CONSISTS OF A BRIEF INTRODUCTION FOLLOWED BY SEVEN MAJOR UNIT TOPICS, INCLUDING: (1) LAMINATED TIMBERS, (2) KERF BENDING, (3) BENDING OF PLYWOOD, (4) BENDING STEAMED OR BOILED WOOD, (5) LAMINATION BENDING, (6) RAG MOULDING OF PLYWOOD, AND (7) ANHYDROUS AMMONIA BENDING. MOST UNITS CONTAIN DESCRIPTIVE AND EXPLANATORY INFORMATION

IND ARTS

31

OBJECTIVES, CONTENT OUTLINES, DRAWINGS AND DIAGRAMS, SUGGESTED PROCEDURES, AND USES OF THE MATERIALS PRODUCED. SUPPLEMENTARY MATERIALS INCLUDE A LIST OF FILMS AND FILMSTRIPS, A GLOSSARY, A BIBLIOGRAPHY, AND REFERENCE AND INSTRUCTIONAL AIDS. RELATED DOCUMENTS ARE AVAILABLE AS VT 007 858, VT 007 859 AND VT 007 861. (AW)

VT 007 858 ED 031 557
ADHESIVES; A BASE SYLLABUS ON WOOD TECHNOLOGY.

EASTERN KENTUCKY UNIV., RICHMOND
PUB DATE - AUG68 70P. FROM NDEA INST. ON WOOD TECHNOLOGY (EASTERN KENTUCKY UNIV., JUNE 10-AUG. 2, 1968).

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *ADHESIVES; SUMMER INSTITUTES; CURRICULUM DEVELOPMENT; *WOODWORKING; *RESOURCE MATERIALS; TEACHER DEVELOPED MATERIALS; INSTRUCTIONAL IMPROVEMENT; TEACHER EDUCATION
IDENTIFIERS - *NATIONAL DEFENSE EDUCATION ACT TITLE XI INSTITUTE; NDEA TITLE XI INSTITUTE

ABSTRACT - PREPARED BY PARTICIPANTS IN THE 1968 NATIONAL DEFENSE EDUCATION ACT INSTITUTE ON WOOD TECHNOLOGY, THIS SYLLABUS IS ONE OF A SERIES OF BASIC OUTLINES DESIGNED TO AID COLLEGE LEVEL INDUSTRIAL ARTS INSTRUCTORS IN IMPROVING AND BROADENING THE SCOPE AND CONTENT OF THEIR PROGRAMS. THE GUIDE IS DIVIDED INTO THREE SECTIONS, THE FIRST OF WHICH DEALS WITH THE TYPES OF CHARACTERISTICS OF ADHESIVES AND INCLUDES A DISCUSSION OF EACH OF THE IMPORTANT ADHESIVES. UNIT II IS CONCERNED WITH APPLICATION, CLAMPING, AND CURING OF ADHESIVES, AND CONTAINS EXCERPTS FROM ARTICLES ON GLUES AND ADHESIVES, DRAWINGS, AND PHOTOGRAPHS TO ILLUSTRATE THE MATERIAL COVERED. THE THIRD UNIT IS A DISCUSSION OF ADHESIVE BOND TESTS AND THE TECHNIQUES FOR CONDUCTING THEM. SUPPLEMENTARY MATERIALS INCLUDED ARE A GLOSSARY, A BIBLIOGRAPHY, AND AN APPENDIX LISTING GLUE AND ADHESIVE MANUFACTURERS. RELATED DOCUMENTS ARE AVAILABLE AS VT 007 857, VT 007 859, AND VT 007 861. (AW)

VT 007 859 ED 031 558
LUMBER AND RELATED PRODUCTS; A BASE SYLLABUS ON WOOD TECHNOLOGY.

EASTERN KENTUCKY UNIV., RICHMOND
PUB DATE - AUG68 108P. FROM NDEA INST. ON WOOD TECHNOLOGY (EASTERN KENTUCKY UNIV., JUNE 10-AUG. 2, 1968).

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; LUMBER INDUSTRY; *BUILDING MATERIALS; *WOODWORKING; CURRICULUM DEVELOPMENT; SUMMER INSTITUTES; TEACHER EDUCATION; *RESOURCE MATERIALS; TEACHER DEVELOPED MATERIALS; INSTRUCTIONAL IMPROVEMENT
IDENTIFIERS - *NATIONAL DEFENSE EDUCATION ACT TITLE XI INSTITUTE; NDEA TITLE XI INSTITUTE

ABSTRACT - PREPARED BY PARTICIPANTS IN THE 1968 NATIONAL DEFENSE EDUCATION ACT INSTITUTE ON WOOD TECHNOLOGY, THIS SYLLABUS IS ONE OF A SERIES OF BASIC OUTLINES DESIGNED TO AID

COLLEGE LEVEL INDUSTRIAL ARTS INSTRUCTORS IN IMPROVING AND BROADENING THE SCOPE AND CONTENT OF THEIR PROGRAMS. THE PRIMARY OBJECTIVE OF THIS COURSE OUTLINE IS TO POINT OUT THE IMPORTANCE AND THE MANY USES OF WOOD AND WOOD PRODUCTS. TOPICS COVERED ARE: (1) LUMBER GRADES AND SIZES, (2) PLYWOOD, (3) VENEER, (4) FIBERBOARD, (5) PARTICLEBOARD, (6) SHEETBOARD, (7) INSULATION BOARD, (8) STRUCTURAL SANDWICH CONSTRUCTION, (9) SHINGLES, (10) PULP AND PAPER, (11) WOOD FLGUR, AND (12) CELLULOSE-DERIVED PRODUCTS. MOST UNITS CONTAIN INFORMATION ON MANUFACTURING PROCESSES, PROPERTIES, TYPES AND GRADES, AND USES OF THE PRODUCTS. SELECTED BIBLIOGRAPHIES ARE LISTED FOR EACH UNIT. THE FINAL SECTION PROVIDES INSTRUCTIONAL AIDS, SUGGESTED PROJECTS AND STUDENT ACTIVITIES, AND MATERIALS AND EQUIPMENT NEEDED FOR SPECIFIC PROJECTS. THE DOCUMENT IS ILLUSTRATED WITH DRAWINGS, CHARTS, AND PHOTOGRAPHS. RELATED DOCUMENTS ARE AVAILABLE AS VT 007 857, VT 007 858, AND VT 007 861. (AW)

VT 007 860 ED 031 559
WOOD SUBSTITUTES; A BASE SYLLABUS ON WOOD TECHNOLOGY.

EASTERN KENTUCKY UNIV., RICHMOND
PUB DATE - AUG68 58P. FROM NDEA INST. ON WOOD TECHNOLOGY (EASTERN KENTUCKY UNIV., JUNE 10-AUG. 2, 1968).

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *WOODWORKING; TEACHER EDUCATION; *RESOURCE MATERIALS; SUMMER INSTITUTES; TEACHER DEVELOPED MATERIALS; CURRICULUM DEVELOPMENT; INSTRUCTIONAL IMPROVEMENT
IDENTIFIERS - *NATIONAL DEFENSE EDUCATION ACT TITLE XI INSTITUTE; NDEA TITLE XI INSTITUTE; WOOD SUBSTITUTES

ABSTRACT - THIS CURRICULUM GUIDE IS FOR USE BY COLLEGE INSTRUCTORS CONCERNED WITH EXPANDING TRADITIONAL WOODWORKING PROGRAMS. IT WAS DEVELOPED IN A NATIONAL DEFENSE EDUCATION ACT SUMMER INSTITUTE AND IS BASED ON AN OUTLINE PROVIDED BY MEMBERS OF A PREVIOUS INSTITUTE. THE CONTENT CONCERNS WOOD SUBSTITUTES WHICH ARE MADE TO RESEMBLE WOOD AND ARE OFTEN USED WITH WOOD BUT CONTAIN NO WOOD OR WOOD PRODUCTS. UNITS ARE (1) THE MANUFACTURE OF HIGH PRESSURE PLASTIC LAMINATE, (2) VINYLWOOD VENEERS, (3) VINYL WRAPPED WOOD SUBSTITUTES, (4) WOOD GRAIN REPRODUCTION ON WOOD AND OTHER MATERIALS, AND (5) HIGH PRESSURE MOLDED PRODUCTS. EACH UNIT CONTAINS INFORMATION RELATIVE TO THE DEVELOPMENT, USE, AND PRODUCTION OF THE WOOD SUBSTITUTES AND A REFERENCE BIBLIOGRAPHY. (EM)

VT 007 861 ED 031 560
WOOD PROPERTIES AND KINDS; A BASE SYLLABUS ON WOOD TECHNOLOGY.

EASTERN KENTUCKY UNIV., RICHMOND
PUB DATE - AUG68 130P. FROM NDEA INST. ON WOOD TECHNOLOGY (EASTERN KENTUCKY UNIV., JUNE 10-AUG. 2, 1968).

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL

ARTS; *PLANT SCIENCE; PLANT GROWTH; LUMBER INDUSTRY; TREES; SUMMER INSTITUTES; PLANT IDENTIFICATION; BUILDING MATERIALS; *WOODWORKING; CURRICULUM DEVELOPMENT; TEACHER EDUCATION; *RESOURCE MATERIALS; TEACHER DEVELOPED MATERIALS; INSTRUCTIONAL IMPROVEMENT; LEARNING ACTIVITIES IDENTIFIERS - *NATIONAL DEFENSE EDUCATION ACT TITLE XI INSTITUTE; NDEA TITLE XI INSTITUTE

ABSTRACT - PREPARED BY PARTICIPANTS IN THE 1968 NATIONAL DEFENSE EDUCATION ACT INSTITUTE ON WOOD TECHNOLOGY, THIS SYLLABUS IS ONE OF A SERIES OF BASIC OUTLINES DESIGNED TO AID COLLEGE LEVEL INDUSTRIAL ARTS INSTRUCTORS IN IMPROVING AND BROADENING THE SCOPE AND CONTENT OF THEIR PROGRAMS. THIS BOOKLET IS CONCERNED LARGELY WITH THE PHYSICAL COMPOSITION AND BEHAVIOR OF WOOD AND THE FACTORS INFLUENCING ITS UTILIZATION. HEADINGS OF THE FIVE MAJOR UNITS ARE: (1) WOOD, WHAT IT IS, (2) THE PLANT ORIGIN OF WOOD, (3) GROSS FEATURES OF WOOD, (4) NATURAL DEFECTS IN WOOD, AND (5) THE IDENTIFICATION OF WOOD. A SECTION OF EXPERIMENTS, INCLUDING TEACHING AIDS, EQUIPMENT NEEDED, SAMPLE TEST QUESTIONS, SUGGESTED STUDENT PROBLEMS AND PROJECTS, AND REFERENCES, PRESENTS INFORMATION ON SUCH PROPERTIES OF WOOD AS DENSITY AND SPECIFIC GRAVITY, MOISTURE CONTENT, STRENGTH CHARACTERISTICS, AND STRUCTURE. THE GUIDE IS ILLUSTRATED THROUGHOUT WITH DRAWINGS, DIAGRAMS, PHOTOGRAPHS, TABLES, AND GRAPHS. A GLOSSARY AND BIBLIOGRAPHY ARE INCLUDED. RELATED DOCUMENTS ARE AVAILABLE AS VT D07 857, VT D07 858, AND VT 007 859. (AW)

VT 007 864
INDUSTRIAL ARTS GRAPHIC COMMUNICATIONS 10, 20, 30.

DEPT. OF EDUCATION, EDMONTON (ALBERTA)
GOVERNMENT OF THE PROVINCE OF ALBERTA,
DEPARTMENT OF EDUCATION, ROOM 712, STATIONARY
AND SUPPLIES, ADMINISTRATION BUILDING,
EDMONTON, ALBERTA.
PUB DATE - SEP68 44P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *GRAPHIC ARTS; DRAFTING; PHOTOGRAPHY; PRINTING; COMMUNICATIONS

ABSTRACT - DEVELOPED BY A COMMITTEE OF TEACHERS, SUPERVISORS, AND TEACHER EDUCATORS FOR TEACHER USE IN THREE MULTIPLE ACTIVITY PROGRAMS IN GRAPHICS, THIS CURRICULUM GUIDE IS DESIGNED FOR GRADES 10, 11 AND 12, COVERING 8,000 MINUTES PER COURSE OR A TOTAL OF 24,000 MINUTES FOR ALL THREE COURSES. THE CONTENTS INCLUDE: (1) GENERAL INTRODUCTION, (2) INTRODUCTION TO GRAPHIC COMMUNICATIONS. COURSE ORGANIZATION, AND OBJECTIVES, (3) GRAPHIC COMMUNICATIONS 10, INCLUDING ONE UNIT EACH OF DRAFTING AND PHOTOGRAPHY, AND TWO UNITS OF PRINTING AND REPRODUCING PROCESSES, (4) GRAPHIC COMMUNICATIONS 20, INCLUDING ONE UNIT EACH OF DRAFTING AND PHOTOGRAPHY, AND TWO UNITS OF PRINTING AND PROCESSING, AND (5) GRAPHIC COMMUNICATIONS 30, INCLUDING ONE UNIT EACH IN DRAFTING, PHOTOGRAPHY, PRINTING AND REPRODUCING PROCESSES, AND BINDERY. REFERENCES ARE INCLUDED FOR EACH COURSE. (GR)

VT 007 934
JUNIOR HIGH SCHOOL CURRICULUM GUIDE FOR INDUSTRIAL ARTS.

DEPT. OF EDUCATION, EDMONTON (ALBERTA)
PUB DATE - SEP65 83P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; UPPER GRADES
IDENTIFIERS - ALBERTA; CANADA

ABSTRACT - THIS CURRICULUM GUIDE IS FOR USE BY INDUSTRIAL ARTS TEACHERS OF JUNIOR HIGH SCHOOL PROGRAMS. IT WAS DEVELOPED BY A COMMITTEE OF TEACHERS, SUPERVISORS, AND TEACHER EDUCATORS FOR THE PROVINCE OF ALBERTA, CANADA. BRIEF UNIT OUTLINES ARE GIVEN FOR (1) ELECTRICITY, (2) ELECTRONICS, (3) WOODWORK, (4) GRAPHIC COMMUNICATIONS, (5) GRAPHIC ARTS, (6) POWER MECHANICS, (7) PLASTICS, (8) MACHINE SHOP, (9) SHEET AND BENCH METAL, (10) ELECTRONIC COMPUTERS, (11) INDUSTRIAL CRAFTS, CERAMICS, (12) LEATHER, (13) ART METAL, AND (14) LAPIDARY. SAMPLE INSTRUCTION SHEETS ARE APPENDED. (EM)

VT 007 972
BLODGETT, OMER W.
DESIGN FOR WELDING. SOME PRACTICAL CONSIDERATIONS IN DESIGNING STEEL WELDMENTS.

AMERICAN WELDING SOCIETY, NEW YORK, N.Y.
UNITED ENGINEERING CENTER
AMERICAN WELDING SOCIETY, 345 EAST 47TH STREET, NEW YORK, NEW YORK 10017 (\$2.50).
PUB DATE - 68 86P. PRESENTED AT ANNUAL AWS MEETING (49TH, CHICAGO, APRIL, 1968).

DESCRIPTORS - *SUPPLEMENTARY TEXTBOOKS; *INDUSTRIAL ARTS; *TRADE AND INDUSTRIAL EDUCATION; *WELDING; *DESIGN; TECHNICAL EDUCATION

ABSTRACT - THIS BOOKLET IS FOR USE BY COLLEGE STUDENTS, TEACHERS, OR ENGINEERS INTERESTED IN THE DESIGN AND FABRICATION OF WELDMENTS. IT FOCUSES ON A SYSTEMS APPROACH TO WELDMENTS UTILIZING ADVANCED DESIGN AND FABRICATION TECHNIQUES INVOLVING THE EFFICIENT USE OF STEEL. MAJOR TOPICS ARE: (1) THE SYSTEM APPROACH TO THE EFFICIENT USE OF STEEL, (2) WHAT THE DESIGNER NEEDS TO KNOW, (3) THE DESIGN APPROACH--PART OF WHOLE, (4) DESIGNING FOR STRENGTH AND RIGIDITY, (5) THE DESIGN PROCEDURE, (6) REDESIGN BY EQUIVALENT SECTION, (7) THE DESIGN OF WELDED JOINTS, (8) QUALITATIVE VS. QUANTITATIVE METHODS, (9) MEETING A DESIGN PROBLEM, (10) POTENTIAL SOURCES OF TROUBLE, (11) THE OVER-ALL VIEW, AND (12) IDENTIFICATION OF A DESIGN PROBLEM. ILLUSTRATIONS, EXAMPLES, FORMULAE, AND NOMOGRAPHS ARE PROVIDED FOR PURPOSES OF CLARIFICATION AND PRACTICALITY. (EM)

VT 008 004
BUCHANAN, GLEN, AND OTHERS
A STUDY OF MANUFACTURING INDUSTRIES. AN EXPERIMENTAL COURSE AT THE JUNIOR HIGH SCHOOL LEVEL COMBINING STUDENTS OF GRADES SEVEN, EIGHT, AND NINE.

SHILOH JUNIOR HIGH, PARMA, OHIO
PUB DATE - ND 28P.

DESCRIPTORS - *INDUSTRIAL ARTS; *EXPERIMENTAL CURRICULUM; TEAM TEACHING; JUNIOR HIGH SCHOOLS; *COURSE DESCRIPTIONS; *MANUFACTURING IDENTIFIERS - *SHILOH JUNIOR HIGH SCHOOL; PARMA; OHIO

ABSTRACT - THE MAJOR AIMS OF THIS EXPERIMENTAL INDUSTRIAL ARTS COURSES WERE TO DEVELOP: (1) AN UNDERSTANDING OF THE GROWTH AND DEVELOPMENT OF AMERICAN INDUSTRY, (2) AN UNDERSTANDING OF THE FUNCTIONS OF MANUFACTURING INDUSTRIES, AND (3) THE ABILITY TO SOLVE PROBLEMS RELATED TO THE FUNCTIONS OF MANUFACTURING. SEVENTH AND EIGHTH GRADE CLASSES WHICH MET THE SAME PERIOD WERE COMBINED ON A REGULAR BASIS AND A NINTH GRADE CLASS PARTICIPATED INTERMITTENTLY. A TEACHING TEAM INVOLVED THREE INDUSTRIAL ARTS TEACHERS. THE FUNCTIONS OF MANUFACTURING WHICH WERE TAUGHT WERE: (1) MANAGEMENT, (2) FINANCE, (3) PRODUCTION PLANNING AND CONTROL, (4) THE MANUFACTURING, AND (5) MARKETING. STUDENT CORPORATIONS WERE FORMED, PRODUCT RESEARCH AND DEVELOPMENT WAS DONE, PRODUCTION METHODS WERE EXAMINED, AND A PRODUCT WAS SELECTED AND PRODUCED. EVALUATION OF STUDENTS AND TEACHERS BY TEACHERS AND STUDENTS WAS EMPHASIZED. AN EXTENSIVE BIBLIOGRAPHY IS INCLUDED. (EM)

VT 008 041
INDUSTRIAL ARTS EDUCATION CURRICULUM GUIDE.

VERMONT INDUSTRIAL ARTS TEACHERS' ASSOCIATION
VERMONT STATE DEPT. OF EDUCATION, MONTPELIER.
DIV. OF INSTRUCTIONAL SERVICES
PUB DATE - 68 66P.

DESCRIPTORS - *STATE CURRICULUM GUIDES;
*INDUSTRIAL ARTS; SECONDARY GRADES; COURSE DESCRIPTIONS

ABSTRACT - THIS CURRICULUM GUIDE IS FOR USE BY ADMINISTRATORS AND INDUSTRIAL ARTS TEACHERS IN HIGH SCHOOL PROGRAMS. IT IS A RESULT OF WORK DONE BY A COMMITTEE OF TEACHERS AND A STATE CONSULTANT. TOPICAL OUTLINES ARE GIVEN FOR: (1) DRAFTING, (2) ELECTRICITY, (3) GENERAL METAL, (4) GRAPHIC ARTS, (5) POWER MECHANICS, (6) WOODWORKING. EACH OUTLINE INCLUDES GENERAL, SPECIFIC AND MINIMUM COURSE OBJECTIVES, UNIT OUTLINES, AND LISTS OF TOOLS, EQUIPMENT SUPPLIES, AND INSTRUCTIONAL AIDS. (EM)

VT 008 052
INDUSTRIAL ARTS.

UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
SALT LAKE CITY
PUB DATE - 68 100P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *MANUFACTURING; GRADE 7; GRADE 8; SIMULATION; INSTRUCTIONAL MATERIALS
IDENTIFIERS - *PRODUCTION TECHNOLOGY

ABSTRACT - THIS CURRICULUM GUIDE IS FOR USE BY INDUSTRIAL ARTS TEACHERS, PRINCIPALS, AND OTHERS CONCERNED WITH COURSES COVERING THE PRINCIPLES, PROCESSES, AND CONCEPTS OF PRODUCTION TECHNOLOGY. IT WAS DEVELOPED BY TEACHERS AND TEACHER EDUCATORS WORKING WITH A

STATE SUPERVISOR. THE BASIS AND ORGANIZATION OF THIS GUIDE IS THE PRODUCTION TECHNOLOGY CYCLE: (1) ORIENTATION OR DEVELOPING THE IDEA, (2) ORGANIZATION OF THE CLASS AS A MODEL INDUSTRY, (3) PRE-PRODUCTION PLANNING, (4) PRODUCTION RUN, AND (5) TERMINAL REPORTS. DESCRIPTIVE AND SAMPLE INSTRUCTIONAL MATERIALS AND OBJECTIVES ARE INCLUDED FOR EACH OF THESE SECTIONS. CORPORATE AND MASS PRODUCTION SIMULATION BY STUDENTS IS INVOLVED THROUGHOUT THE GUIDE. IT IS FOR USE IN GRADES 7 OR 8. (EM)

VT 008 071
INDUSTRIAL ARTS; SAFETY GUIDE.

UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
SALT LAKE CITY
UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
1300 UNIVERSITY CLUB BUILDING, 136 EAST SOUTH
TEMPLE, SALT LAKE CITY, UTAH 84111 (\$1.00).
PUB DATE - 68 44P.

DESCRIPTORS - *PROGRAM GUIDES; *INDUSTRIAL ARTS; SAFETY EDUCATION; *SCHOOL SAFETY;
*ACCIDENT PREVENTION; *SCHOOL SHOPS;
SECONDARY GRADES; ILLUSTRATIONS
IDENTIFIERS - UTAH

ABSTRACT - THIS SAFETY GUIDE IS FOR USE BY INDUSTRIAL ARTS TEACHERS. IT WAS DEVELOPED BY A COMMITTEE UNDER THE DIRECTION OF A STATE SUPERVISOR. INFORMATION AND STANDARDS ARE COVERED UNDER 21 TOPICS, SOME OF WHICH ARE: (1) TEACHER LIABILITY, (2) SAFEGUARDING MACHINES, (3) SAFETY PERSONNEL ORGANIZATION, (4) HOUSEKEEPING, (5) EXPLOSIVE HAZARDS, (6) ELECTRICAL HAZARDS, (7) ILLUMINATION, (8) TREATMENT OF INJURIES, AND (9) ACCIDENT REPORTING. UTAH HOUSE BILL NO. 25--EYE SAFETY LAW, SHOP SAFETY INSPECTION CHECK LIST, ILLUSTRATIONS OF MINIMUM MACHINE SAFETY ZONES, ILLUSTRATIONS OF FIRE EXTINGUISHERS, AND A SAMPLE ACCIDENT REPORT FORM ARE APPENDED. (EM)

VT 008 072
INDUSTRIAL ARTS; GRAPHIC ARTS.

UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
SALT LAKE CITY
UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
1300 UNIVERSITY CLUB BUILDING, 136 EAST SOUTH
TEMPLE, SALT LAKE CITY, UTAH 84111 (\$1.00).
PUB DATE - 68 47P.

DESCRIPTORS - *STATE CURRICULUM GUIDES;
*INDUSTRIAL ARTS; *GRAPHIC ARTS; SECONDARY GRADES; INSTRUCTIONAL MATERIALS;
BIBLIOGRAPHIES
IDENTIFIERS - UTAH

ABSTRACT - THIS CURRICULUM GUIDE IS ONE OF SEVERAL RELATED GUIDES DEVELOPED TO PROVIDE ADMINISTRATORS AND INDUSTRIAL ARTS TEACHERS WITH THE STATE ADOPTED CURRICULUM OUTLINE FOR GRAPHIC ARTS. IT WAS DEVELOPED UNDER THE DIRECTION OF A STATE SUPERVISOR. MAJOR SECTIONS ARE DEFINITIONS OF THE SEVEN GRAPHIC ARTS AREAS, THE JUNIOR HIGH SCHOOL GRAPHIC ARTS PROGRAM, AND THE SENIOR HIGH SCHOOL GRAPHIC ARTS PROGRAM. PROVIDED ARE PHILOSOPHICAL STATEMENTS, PROGRAM OBJECTIVES,

TOPICAL OUTLINES FOR COURSES, STUDENT ACTIVITIES, AND TEACHING AIDS. LISTS OF BOOKS, FILMS AND FILM STRIPS, FILM SOURCES, AND EQUIPMENT ARE INCLUDED. (EM)

VT 008 156
INDUSTRIAL ARTS; POWER MECHANICS AND SMALL ENGINES.

UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
SALT LAKE CITY
UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
1300 UNIVERSITY CLUB BUILDING, 136 EAST SOUTH
TEMPLE, SALT LAKE CITY, UTAH 84111 (\$1.00).
PUB DATE - 68 32P.

DESCRIPTORS - *STATE CURRICULUM GUIDES;
*INDUSTRIAL ARTS; *ENGINES; *POWER MECHANICS;
SECONDARY GRADES; INSTRUCTIONAL MATERIALS;
BIBLIOGRAPHIES

ABSTRACT - THIS CURRICULUM GUIDE IS ONE IN A SERIES DEVELOPED TO PROVIDE ADMINISTRATORS AND INDUSTRIAL ARTS TEACHERS WITH THE STATE-ADOPTED CURRICULUM FOR POWER AND SMALL ENGINE MECHANICS. IT WAS DEVELOPED BY A COMMITTEE UNDER THE DIRECTION OF A STATE SUPERVISOR. COURSE OUTLINES ARE PROVIDED FOR A 9-WEEK AND AN 18-WEEK COURSE APPROPRIATE FOR USE AT THE NINTH-GRADE LEVEL. EACH PROVIDES A TOPICAL OUTLINE, TIME ALLOTMENT, AND INSTRUCTIONAL AIDS AND ACTIVITIES. SUPPLEMENTARY MATERIALS INCLUDE A SAMPLE PROCEDURE SHEET, TEACHING GUIDE, FILM LIST, TOOL LIST, AND TEACHING AIDS. (EM)

VT 008 184 ED 033 193
WOLANSKY, WILLIAM D.; COCHRAN, LESLIE H.
COURSE OUTLINE AND RESOURCE MATERIALS FOR
FLUID POWER INSTRUCTION IN SECONDARY SCHOOLS,
PREPARED AT THE NDEA SUMMER
INSTITUTE(DETROIT, JUNE 24-AUGUST 2, 1968).

WAYNE STATE UNIV., DETROIT, MICH. DEPT. OF
INDUSTRIAL EDUCATION.
OFFICE OF EDUCATION (OHEW), WASHINGTON, D.C.
PUB DATE - 68 37P.

DESCRIPTORS - *FLUID POWER EDUCATION;
INDUSTRIAL ARTS; *COURSE CONTENT; SCHOOL
SHOPS; SUMMER INSTITUTES; INSTRUCTIONAL
MATERIALS; *INSTRUCTIONAL AIDS; *TEACHER
DEVELOPED MATERIALS
IDENTIFIERS - NATIONAL DEFENSE EDUCATION ACT
TITLE XI INSTITUTE; NOEA TITLE XI INSTITUTE

ABSTRACT - THIS COURSE OUTLINE WAS DEVELOPED BY INDUSTRIAL ARTS TEACHERS DURING THE 1968 NATIONAL DEFENSE EDUCATION ACT SUMMER INSTITUTE. IT IS INTENDED FOR THE SPECIFIC USE OF TEACHERS INVOLVED IN FLUID POWER COURSES. A TOPICAL OUTLINE COVERS TERMINOLOGY, EQUIPMENT, PROCEDURES, AND SAFETY TECHNIQUES. OTHER SECTIONS INCLUDE A BOOK LIST, A BOOK EVALUATION FORM, AN AUDIOVISUAL MATERIALS LIST, AND FLOOR PLANS FOR SCHOOL LABORATORIES. THE APPENDIX INCLUDES A PARTICIPANT LIST. THE FINAL REPORT OF THE INSTITUTE IS AVAILABLE AS VT 008 185 (ARM FALL 1970). (EM)

VT 008 219
COUNTY COURSE OF STUDY: INDUSTRIAL ARTS.

FLORIDA STATE DEPT. OF EDUCATION, TALLAHASSEE
PUB DATE - 66 58P.

DESCRIPTORS - *PROGRAM GUIDES; CURRICULUM
GUIDES; *INDUSTRIAL ARTS; SECONDARY GRADES;
EDUCATIONAL EQUIPMENT; PROGRAM CONTENT;
EVALUATION CRITERIA; *PROGRAM DEVELOPMENT;
EDUCATIONAL OBJECTIVES; EDUCATIONAL
FACILITIES

ABSTRACT - THIS PROGRAM GUIDE WAS PREPARED BY A DEVELOPMENTAL GROUP OF TEACHERS THROUGH AN EXAMINATION AND RESTATEMENT OF THE PLACE AND PURPOSE OF INDUSTRIAL ARTS EDUCATION IN A CHANGING, EVER-EXPANDING INDUSTRIAL AND TECHNICAL SOCIETY. GUIDELINES FOR PROGRAM DEVELOPMENT AND EVALUATION ARE PROVIDED FOR A DIFFERENTIATED INDUSTRIAL ARTS PROGRAM BASED ON ORIENTATION AND EXPLANATORY EXPERIENCES IN THE JUNIOR HIGH SCHOOL AND CHARACTERIZED BY SPECIALIZATION AND CONCENTRATION IN THE SENIOR HIGH SCHOOL. THE GUIDELINES ARE DESIGNED TO ASSIST SCHOOL BOARDS, ADMINISTRATORS, AND TEACHERS IN PLANNING AND DEVELOPING GENERAL AND SPECIFIC PROGRAM OBJECTIVES, PROGRAM FINANCING, AND LABORATORY FACILITIES AND EQUIPMENT. THE COURSE OF STUDY OUTLINES LEARNING UNITS AND ACTIVITIES FOR (1) A 12-WEEK INDUSTRIAL CRAFTS COURSE FOR GRADE 7, (2) 1-YEAR COURSES IN DRAFTING, GENERAL METALS, WOODWORKING, ELECTRONICS, AND POWER MECHANICS FOR GRADES 10-12. A LIST OF EDUCATIONAL EQUIPMENT NECESSARY TO PROVIDE ADEQUATE INSTRUCTION IS GIVEN. (EM)

VT 008 238
A GUIDE TO IMPROVEMENT OF INDUSTRIAL ARTS IN
OKLAHOMA SCHOOLS GRADES 7-12L.

OKLAHOMA CURRICULUM IMPROVEMENT COMMISSION
OKLAHOMA STATE DEPT. OF EDUCATION, OKLAHOMA
CITY

E
PUB DATE - 6 541P

DESCRIPTORS - *STATE CURRICULUM GUIDES;
*PROGRAM GUIDES; *INDUSTRIAL ARTS;
EDUCATIONAL OBJECTIVES; *CURRICULUM;
*PROGRAM DESCRIPTIONS; TEACHER
QUALIFICATIONS; SCHOOL SAFETY; PROGRAM
EVALUATION; SECONDARY GRADES;
BIBLIOGRAPHIES; INSTRUCTIONAL AID
IDENTIFIERS - *OKLAHOMA

ABSTRACT - THIS PROGRAM GUIDE IS FOR USE BY TEACHERS AND ADMINISTRATORS CONCERNED WITH INDUSTRIAL ARTS PROGRAMS. IT WAS DEVELOPED BY THE STATE INDUSTRIAL ARTS STUDY COMMITTEE OF THE OKLAHOMA CURRICULUM IMPROVEMENT COMMISSION AND RESULTED FROM A PROJECT WHICH WAS STARTED IN 1960. MAJOR SECTIONS ARE TITLED: (1) PHILOSOPHY OF INDUSTRIAL ARTS, (2) THE PROGRAM: SCOPE AND SEQUENCE OF INDUSTRIAL ARTS COURSES, (3) ORGANIZATION AND ADMINISTRATION, (4) ACADEMIC PREPARATION AND PROFESSIONAL PARTICIPATION, (5) EVALUATION, AND (6) SAFETY IN THE SCHOOL SHOP. SUPPLEMENTARY MATERIALS INCLUDE A STUDENT ACCIDENT REPORT FORM, THE NATIONAL SAFETY COUNCIL INSPECTION CHECK LIST, AND A CURRICULUM MATERIALS BIBLIOGRAPHY. (EM)

IND ARTS

35

VT 008 251

SUGGESTED RELATED INFORMATION FOR THE ELECTRICITY AREA. INDUSTRIAL ARTS COMPREHENSIVE GENERAL SHOP COURSE.

NEW YORK STATE EDUCATION DEPT., ALBANY
PUB DATE - 65 185P.

DESCRIPTORS - *STUDY GUIDES; *INDUSTRIAL ARTS; *ELECTRICITY; JUNIOR HIGH SCHOOLS; LEARNING ACTIVITIES; TESTS; BIBLIOGRAPHIES

ABSTRACT - THIS STUDY GUIDE IS DESIGNED TO DIRECT THE INDUSTRIAL ARTS STUDENT IN THE STUDY OF RELATED SUBJECT MATTER IN GENERAL ELECTRICITY IN THE 7TH, 8TH, AND 9TH GRADE COMPREHENSIVE GENERAL SHOP. IT WAS DEVELOPED BY A TEACHER AND STATE SUPERVISOR IN COOPERATION WITH THE NEW YORK BUREAU OF VOCATIONAL CURRICULUM DEVELOPMENT AND INDUSTRIAL TEACHER TRAINING AND THE BUREAU OF INDUSTRIAL ARTS EDUCATION. TO ASSIST THE INSTRUCTOR IN LESSON SELECTION AND USE, THE 79 LESSON TOPICS ARE GROUPEC INTO 6 DIVISIONS OF (1) PLANNING, (2) SOCIAL-ECONOMICS, (3) GUIDANCE, (4) SCIENCE, (5) SAFETY AND HYGIENE, AND (6) CONSUMER VALUES. EACH LESSON TOPIC IS PREPARED FOR A 10-MINUTE AVERAGE TEACHER PRESENTATION AND INCLUDES SPECIFIC BACKGROUND INFORMATION RELATED TO THE TOPIC, A LIST OF TOPIC OBJECTIVES, REFERENCES, A STUDENT ACTIVITY ASSIGNMENT AND A TOPIC TEST. THE MATERIAL IS COORDINATED TO THE RELATED LESSON TOPICS IN THE NEW YORK STATE SYLLABUS FOR THE COMPREHENSIVE GENERAL SHOP. THE APPENDIX CONTAINS A COMPOSITE BIBLIOGRAPHY OF BOOKS, FILMS, MAGAZINES, AND PERIODICALS AS WELL AS A DETAILED INDEX OF THE STUDY GUIDE CONTENTS. (HC)

VT 008 253

INDUSTRIAL ARTS SYLLABUS IN TRANSPORTATION.

STATE UNIV. OF NEW YORK, ALBANY. BUREAU OF SECONDARY CURRICULUM DEVELOPMENT
PUB DATE - 66 101P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *TRANSPORTATION; SECONDARY GRADES

ABSTRACT - THIS CURRICULUM GUIDE IS FOR USE BY TEACHERS AND ADMINISTRATORS CONCERNED WITH AN INDUSTRIAL ARTS COURSE ON TRANSPORTATION. IT WAS PREPARED BY A COMMITTEE OF TEACHERS. MAJOR DIVISIONS OF THE COURSE OUTLINE ARE SMALL ENGINES, AUTOMOTIVE TRANSPORTATION, AVIATION TRANSPORTATION, AND MARINE TRANSPORTATION. OPTIONAL DIVISIONS TREAT BICYCLES, MOTORCYCLES, FARM TRACTORS, DIESEL ENGINES, JET ENGINES, AND RAILROADS. EACH OF THESE LISTS DEMONSTRATIONS, OPERATIONS AND PROCESSES, AND RELATED LESSON TOPICS WHICH COVER PLANNING, SOCIAL ECONOMICS, SCIENCE, SAFETY AND HYGIENE, AND CONSUMER VALUES. (EM)

VT 008 255

INDUSTRIAL ARTS EDUCATION.

SOUTH DAKOTA STATE BOARD OF EDUCATION, PIERRE
SOUTH DAKOTA STATE DEPARTMENT OF EDUCATION, PIERRE, SOUTH DAKOTA (SINGLE COPIES AVAILABLE).
PUB DATE - 67 80P.

DESCRIPTORS - *STATE CURRICULUM GUIDES; *INDUSTRIAL ARTS; SECONDARY GRADES
IDENTIFIERS - SOUTH DAKOTA

ABSTRACT - THIS CURRICULUM GUIDE IS FOR USE BY INDUSTRIAL ARTS TEACHERS AND ADMINISTRATORS CONCERNED WITH SECONDARY COURSES. IT WAS DEVELOPED BY A CURRICULUM COMMITTEE UNDER THE DIRECTION OF A STATE SUPERVISOR. MAJOR SECTIONS COVERING A JUNIOR AND SENIOR HIGH SCHOOL CURRICULUM ARE: (1) DRAFTING, (2) ELECTRICITY-ELECTRONICS, (3) GRAPHIC ARTS, (4) INDUSTRIAL CRAFTS, (5) METALS, (6) POWER MECHANICS, AND (7) WOODWORK. EACH SECTION PROVIDES OBJECTIVES AND TOPICAL OUTLINES AND CITES REFERENCES AND AIDS FOR SEVERAL COURSES. (EM)

VT 008 256

ELECTRICITY PROJECT IDEAS FOR INDUSTRIAL ARTS.

NEW YORK STATE EDUCATION DEPT., ALBANY.
BUREAU OF INDUSTRIAL ARTS EDUCATION
PUBLICATIONS DISTRIBUTION UNIT, STATE
EDUCATION DEPARTMENT, ROOM 169, EDUCATION
BUILDING, ALBANY, NEW YORK 12224.
PUB DATE - 65 137P.

DESCRIPTORS - *RESOURCE MATERIALS; *INDUSTRIAL ARTS; *ELECTRICITY; SECONDARY GRADES; *STUDENT PROJECTS

ABSTRACT - THIS MONOGRAPH CONTAINS 28 STUDENT PROJECTS AND 19 EXPERIMENTS FOR TEACHER USE IN GRADES 7-12. EACH UNIT CONSISTS OF AN ELECTRICAL PROJECT DESCRIPTION, PLAN, AND MATERIAL LIST AND CONSTRUCTION HINTS. THE EXPERIMENTS DEMONSTRATE BASIC THEORY OF ELECTRICITY AND ITS APPLICATION. (EM)

VT 008 259 ED 039 315
INSTRUCTIONAL UNITS FOR INDUSTRIAL MATERIALS, VOL. II.

SAN JOSE STATE COLL., CALIF.
PUB DATE - 68 308P. MATERIALS PREPARED AT NOEA INSTITUTE FOR ADVANCED STUDY IN INDUSTRIAL ARTS (SAN JOSE STATE COLL., JUN 24-AUG 2, 1968)

DESCRIPTORS - *INDUSTRIAL ARTS; *INSTRUCTIONAL MATERIALS; INDUSTRIAL ARTS TEACHERS; TECHNICAL EDUCATION; TRANSPARENCIES; AUDIOVISUAL AIDS; SLIDES; *RESOURCE MATERIALS; TEACHER DEVELOPED MATERIALS; MATERIAL DEVELOPMENT; PLASTICS; ELECTRONICS; GRAPHIC ARTS; LUBRICANTS; FUELS; *LABORATORY EXPERIMENTS
IDENTIFIERS - *NOEA INSTITUTE; NATIONAL DEFENSE EDUCATION ACT

ABSTRACT - THIS SECOND VOLUME CONTAINS THE REMAINDER OF THE EXPERIMENTS AND INSTRUCTIONAL MATERIAL DEVELOPED AT THE NOEA INSTITUTE. INCLUDED ARE SEVEN UNITS ON POLYMERS, THREE UNITS ON ELECTRONICS, THREE UNITS ON GRAPHIC ARTS, 10 UNITS ON FUELS AND LUBRICANTS, AND ONE UNIT ON TEXTILES. A LIST OF REVIEWED FILMS AND SOURCE AVAILABILITY IS APPENDED. VOLUME I IS AVAILABLE AS VT 008 258 (ALSO IN THIS ISSUE). (NOT AVAILABLE IN HARD

COPY DUE TO MARGINAL LEGIBILITY OF ORIGINAL DOCUMENT). (GR)

VT 008 268
SAFETY EDUCATION IN THE SCHOOL SHOP.

GORHAM STATE TEACHERS COLL., MAINE.
INDUSTRIAL ARTS DEPT.
PUB DATE - NO 68P.

DESCRIPTORS - *RESOURCE MATERIALS;
*INDUSTRIAL ARTS; SECONDARY GRADES; *SCHOOL
SAFETY; *SCHOOL SHOPS

ABSTRACT - THIS SAFETY MANUAL IS FOR USE BY
INDUSTRIAL ARTS TEACHERS. IT WAS DEVELOPED BY
17 TEACHERS ENROLLED IN A SUMMER COURSE. THE
MAJOR PORTION OF THE DOCUMENT IS DEVOTED TO
35 CHECK LISTS OF SAFETY PRACTICES FOR JUNIOR
AND SENIOR HIGH SCHOOL STUDENTS. GENERAL
SAFETY REGULATIONS AND PRECAUTIONS ARE ALSO
DISCUSSED. (EM)

VT 008 269 ED 026 273
FEIRER, JOHN L.
SPACE RESOURCES FOR THE HIGH SCHOOL.
INDUSTRIAL ARTS RESOURCE UNITS.

NATIONAL AERONAUTICS AND SPACE
ADMINISTRATION, WASHINGTON, D.C.
NATIONAL AERONAUTICS AND SPACE
ADMINISTRATION, WASHINGTON, D.C. 20546.
PUB DATE - APR67 174P.

DESCRIPTORS - *RESOURCE GUIDES; *TEXTBOOKS;
*INDUSTRIAL ARTS; *AEROSPACE TECHNOLOGY;
SECONDARY GRADES; TEACHER EDUCATION; STUDENT
PROJECTS; REFERENCE MATERIALS; *AEROSPACE
INDUSTRY; AUDIOVISUAL AIDS; CONFERENCES
IDENTIFIERS - A SPACE TECHNOLOGY CONFERENCE
FOR INDUSTRIAL ARTS EDUCATORS, INDIAN HARBOR
BEACH, FLORIDA, MAY 3-6, 1966

ABSTRACT - THIS RESOURCE GUIDE IS FOR USE BY
INDUSTRIAL ARTS TEACHERS, SUPERVISORS, AND
TEACHER EDUCATORS. IT WAS PREPARED BY A
REPRESENTATIVE COMMITTEE OF EDUCATIONAL
LEADERS FOR THE NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION (NASA). THE PURPOSE IS
TO PROVIDE TEACHERS WITH SPECIFIC SUGGESTIONS
ON WAYS AND MEANS THAT SPACE RELATED CONTENT
ELEMENTS MAY BE FUSED INTO INDUSTRIAL ARTS
COURSES; SOME IDEAS ARE IN THE FORM OF UNITS
AND SOME ARE STUDENT ACTIVITIES. UNIT TITLES
ARE: (1) THE AEROSPACE INDUSTRY--AN OVERVIEW,
(2) PRODUCTS AND MATERIALS, (3) AEROSPACE
OCCUPATIONS, (4) DESIGN AND DRAFTING, (5)
METALS, (6) ELECTRICITY-ELECTRONICS, (7)
POWER (8) GRAPHIC ARTS, (9) PLASTICS, (10)
CERAMICS, (11) WOODS, AND (12) NEW
DIRECTIONS. EACH UNIT HAS A BIBLIOGRAPHY OF
NASA TECHNICAL BRIEFS, NASA SPECIAL
PUBLICATIONS, AND REPRESENTATIVE COMMERCIAL
TEXTBOOKS. REFERENCES ARE CODED BY UNIT AND
TYPE. PHOTOGRAPHS, LINE DRAWINGS, PROCEDURE
LISTS, AND MATERIAL LISTS ACCOMPANY MOST
PROJECTS. THE NASA EDUCATIONAL PROGRAMS
DIVISION'S SERVICES, A FILM LIST, AND A
CONFERENCE PROGRAM AND PARTICIPANT LIST FOR
"A SPACE TECHNOLOGY CONFERENCE FOR INDUSTRIAL
ARTS EDUCATORS" ARE APPENDED. (EM)

VT 008 270
HANDBOOK FOR INDUSTRIAL ARTS EDUCATION.

MISSOURI STATE DEPT. OF EDUCATION, JEFFERSON
CITY
PUB DATE - 69 91P.

DESCRIPTORS - *PROGRAM GUIDES; *INDUSTRIAL
ARTS; *INDUSTRIAL ARTS TEACHERS; ELEMENTARY
GRADES; SECONDARY GRADES; TEACHER EDUCATION
IDENTIFIERS - MISSOURI

ABSTRACT - THIS HANDBOOK IS FOR USE BY
TEACHERS, PROFESSORS, AND ADMINISTRATORS OF
INDUSTRIAL ARTS PROGRAMS. IT WAS DEVELOPED BY
A COMMITTEE WITHIN THE MISSOURI COUNCIL FOR
INDUSTRIAL ARTS EDUCATION. MAJOR PARTS ARE
TITLED: (1) INTRODUCTION TO INDUSTRIAL ARTS
EDUCATION, (2) THE INDUSTRIAL ARTS
CURRICULUM, (3) IMPLEMENTING THE CURRICULUM,
(4) PROFESSIONAL GROWTH, AND (5) INDUSTRIAL
ARTS HISTORY, TEACHER EDUCATION, AND
CERTIFICATION. THE PRIMARY FOCUS IS ON
ELEMENTARY AND SECONDARY INDUSTRIAL ARTS;
HOWEVER, THERE IS CONSIDERABLE MATERIAL ON
COLLEGE PROGRAMS, TEACHER CERTIFICATION, AND
PROFESSIONAL ASSOCIATIONS. A GLOSSARY,
ORGANIZATIONAL CHARTS, SAMPLE FORMS,
EQUIPMENT DEPRECIATION INFORMATION, SCHOOL
SHOP SAFETY INSPECTION LIST, AND STUDENT
PROGRESS CHART ARE APPENDED. (EM)

VT 008 320
SUGGESTED RELATED INFORMATION FOR THE METAL
AREA. INDUSTRIAL ARTS COMPREHENSIVE GENERAL
SHOP COURSE.

STATE UNIV. OF NEW YORK, ALBANY. BUREAU OF
INDUSTRIAL ARTS EDUCATION
PUB DATE - 61 156P.

DESCRIPTORS - *STUDY GUIDES; *INDUSTRIAL
ARTS; *INDUSTRIAL ARTS TEACHERS; TEACHER
EDUCATION
IDENTIFIERS - *RELATED INSTRUCTION

ABSTRACT - THIS STUDY GUIDE IS FOR USE BY
INDUSTRIAL ARTS TEACHERS DURING A COURSE ON
THE ROLE OF RELATED INSTRUCTION IN JUNIOR
HIGH SCHOOL GENERAL SHOPS. EACH OF THE 68
LESSON GUIDES INCLUDES AN INTRODUCTION,
OBJECTIVES, REFERENCES, ASSIGNMENTS, AND TEST
ITEMS. SOME OF THE LESSONS ARE: (1) PLANNING,
(2) SOCIAL ECONOMICS, (3) GUIDANCE, (4)
SCIENCE, (5) SAFETY AND HYGIENE, AND (6)
CONSUMER VALUES. THIS IS AN EDITED REPRINT OF
THE 1949 EDITION. (EM)

VT 008 381
INDUSTRIAL ARTS. DRAFTING GUIDE .

UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
SALT LAKE CITY
UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
1300 UNIVERSITY CLUB BUILDING, 136 EAST SOUTH
TEMPLE, SALT LAKE CITY, UTAH 84111 (\$1.00).
PUB DATE - 66 57P.

DESCRIPTORS - *DRAFTING; STATE CURRICULUM
GUIDES; INDUSTRIAL ARTS; SECONDARY GRADES

ABSTRACT - THIS CURRICULUM GUIDE IS ONE OF A
SERIES OF RELATED GUIDES WHICH WERE DEVELOPED

IND ARTS

37

BY A CURRICULUM COMMITTEE UNDER THE LEADERSHIP OF THE STATE SPECIALIST IN INDUSTRIAL ARTS. IT IS FOR USE BY DRAFTING TEACHERS AND OTHER SCHOOL PERSONNEL CONCERNED WITH DRAFTING COURSES. MAJOR SECTIONS COVER (1) BASIC DRAWING, SKETCHING, AND PLANNING, (2) BASIC MACHINE DRAWING, AND (3) TECHNICAL DRAFTING I, II, III, AND IV. FOR EACH OF THESE OBJECTIVES, AN INSTRUCTIONAL PLAN, CONTENT OUTLINE, AND SUGGESTED ASSIGNMENTS ARE GIVEN. RELATED DOCUMENTS ARE VT 008 382-VT 008 385. (EM)

VT 008 382
INDUSTRIAL ARTS. METALS .

UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
SALT LAKE CITY
UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
1300 UNIVERSITY CLUB BUILDING, 136 EAST SOUTH
TEMPLE, SALT LAKE CITY, UTAH 84111 (\$1.00).
PUB DATE - 66 66P.

DESCRIPTORS - STATE CURRICULUM GUIDES;
INDUSTRIAL ARTS; *METALS; SECONDARY GRADES

ABSTRACT - THIS CURRICULUM GUIDE IS ONE OF A SERIES OF RELATED GUIDES WHICH WERE DEVELOPED BY A CURRICULUM COMMITTEE UNDER THE LEADERSHIP OF THE STATE SPECIALIST IN INDUSTRIAL ARTS. IT IS FOR USE BY METALS TEACHERS AND OTHER SCHOOL PERSONNEL CONCERNED WITH METALS COURSES IN GRADE 8-12. MAJOR SECTIONS COVER EXPLORATORY METALS (12 WEEKS), INTRODUCTORY METALS (18 WEEKS), GENERAL METALS (36 WEEKS), OXY-ACETYLENE WELDING (18 WEEKS), AND ARC WELDING (18 WEEKS). FOR EACH OF THESE AN INSTRUCTIONAL PLAN AND SAMPLE TEACHING GUIDE, STUDY GUIDE, AND PROCEDURE GUIDE ARE GIVEN. RELATED DOCUMENTS ARE VT 008 381-VT 008 385. (EM)

VT 008 383
INDUSTRIAL ARTS. AUTOMOTIVE MECHANICS GUIDE .

UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
SALT LAKE CITY
UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
1300 UNIVERSITY CLUB BUILDING, 136 EAST SOUTH
TEMPLE, SALT LAKE CITY, UTAH 84111 (\$1.00).
PUB DATE - 66 70P.

DESCRIPTORS - STATE CURRICULUM GUIDES;
INDUSTRIAL ARTS; *AUTO MECHANICS; SECONDARY GRADES

ABSTRACT - THIS CURRICULUM GUIDE IS ONE OF A SERIES OF RELATED GUIDES WHICH WERE DEVELOPED BY A CURRICULUM COMMITTEE UNDER THE LEADERSHIP OF THE STATE SPECIALIST IN INDUSTRIAL ARTS. IT IS FOR USE BY AUTO MECHANICS TEACHERS AND OTHER SCHOOL PERSONNEL CONCERNED WITH AUTO MECHANICS COURSES. COURSE UNITS INCLUDE (1) THE AUTOMOBILE, (2) COMMON TOOLS, (3) FASTENING DEVICES, (4) MEASURING INSTRUMENTS, (5) SAFETY, (6) TIRES, (7) LUBRICATION, (8) ENGINES, (9) COOLING DEVICES, (10) FUEL SYSTEMS, (11) ELECTRICAL SYSTEMS, (12) HYDRAULICS AND PNEUMATICS, (13) BRAKES, (14) STEERING, (15) SPRINGS AND SUSPENSIONS, (16) POWER TRAIN, (17) AIR CONDITIONING, AND (18) BODY. A TOPICAL OUTLINE IS PROVIDED FOR THESE

UNITS. SUPPLEMENTARY MATERIALS INCLUDE TEXT, FILM, AND TOOL LISTS. RELATED DOCUMENTS ARE VT 008 391-VT 008 385. (EM)

VT 008 384
INDUSTRIAL ARTS. WOODS .

UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
SALT LAKE CITY
UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
1300 UNIVERSITY CLUB BUILDING, 136 EAST SOUTH
TEMPLE, SALT LAKE CITY, UTAH 84111 (\$1.00).
PUB DATE - 66 59P.

DESCRIPTORS - STATE CURRICULUM GUIDES;
INDUSTRIAL ARTS; *WOODWORKING; SECONDARY GRADES

ABSTRACT - THIS CURRICULUM GUIDE IS ONE OF A SERIES OF RELATED GUIDES WHICH WERE DEVELOPED BY A CURRICULUM COMMITTEE UNDER THE LEADERSHIP OF THE STATE SPECIALIST IN INDUSTRIAL ARTS. IT IS FOR USE BY WOODWORKING TEACHERS AND OTHER SCHOOL PERSONNEL CONCERNED WITH WOODWORKING COURSES. MAJOR SECTIONS COVER (1) AN INTRODUCTION TO THE WOODS INDUSTRY (12 WEEKS), (2) EXPLORATORY WOODS (18 WEEKS), (3) GENERAL WOODS (36 WEEKS), (4) ADVANCED WOODS (36 WEEKS), AND (5) WOOD SCIENCE AND TECHNOLOGY (36 WEEKS). SAMPLE TEACHING GUIDES, STUDY GUIDES, AND PROCEDURE GUIDES ARE PROVIDED FOR EACH COURSE. SUPPLEMENTARY MATERIALS INCLUDE TEACHING AIDS, FILM, TRANSPARENCY, AND EQUIPMENT LISTS. RELATED DOCUMENTS ARE VT 008 381-VT 008 385. (EM)

VT 008 385
INDUSTRIAL ARTS. PLASTICS .

UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
SALT LAKE CITY
UTAH STATE BOARD FOR VOCATIONAL EDUCATION,
1300 UNIVERSITY CLUB BUILDING, 136 EAST SOUTH
TEMPLE, SALT LAKE CITY, UTAH 84111 (\$1.00).
PUB DATE - 66 29P.

DESCRIPTORS - STATE CURRICULUM GUIDES;
INDUSTRIAL ARTS; *PLASTICS; SECONDARY GRADES

ABSTRACT - THIS CURRICULUM GUIDE IS ONE OF A SERIES OF RELATED GUIDES WHICH WERE DEVELOPED BY A CURRICULUM COMMITTEE UNDER THE LEADERSHIP OF THE STATE SPECIALIST IN INDUSTRIAL ARTS. IT IS FOR USE BY DRAFTING TEACHERS AND OTHER SCHOOL PERSONNEL CONCERNED WITH DRAFTING COURSES. INCLUDED ARE COURSE OUTLINES FOR A 9-WEEK, AN 18-WEEK, AND A 36-WEEK COURSE IN INDUSTRIAL PLASTICS. SAMPLE TEACHING GUIDES, PROCEDURE GUIDES, AND STUDY GUIDES ARE INCLUDED. SUPPLEMENTARY MATERIALS INCLUDE LISTS OF EQUIPMENT SOURCES AND FILMS. RELATED DOCUMENTS ARE VT 008 381-VT 008 384. (EM)

VT 008 407
STEEB, RALPH
ELEMENTARY SCHOOL INDUSTRIAL ARTS .

FLORIDA STATE DEPT. OF EDUCATION, TALLAHASSEE
PUB DATE - 67 18P.

DESCRIPTORS - *PROGRAM DESCRIPTIONS;
CURRICULUM ENRICHMENT; *INDUSTRIAL ARTS;
*ELEMENTARY SCHOOL CURRICULUM;
*ELEMENTARY GRADES; BIBLIOGRAPHIES; *STATE
PROGRAMS
IDENTIFIERS - *FLORIDA

ABSTRACT - ELEMENTARY INDUSTRIAL ARTS IS CONCERNED WITH ALL THE EXPERIENCES CHILDREN HAVE WITH MATERIALS AND TOOLS AND THE LEARNING AND SATISFACTION WHICH RESULT FROM THESE EXPERIENCES. PLANNED ACTIVITIES AND EXPERIENCES INCLUDE THE CONSTRUCTION OF PROJECTS RELATED TO AND REINFORCING OTHER SUBJECTS AND OF PROJECTS RELATED TO RECREATIONAL AND PERSONAL PURPOSES AND A STUDY OF INDUSTRY WITH EMPHASIS ON ITS ORGANIZATION, MATERIALS, PROCESSES, OCCUPATIONS, PRODUCTS, AND PROBLEMS AND THEIR EFFECT ON MAN'S CULTURE. IN GRADES K-3 THESE ACTIVITIES SHOULD BE TAUGHT BY THE ELEMENTARY TEACHER IN HER SELF-CONTAINED CLASSROOM, WHILE IN GRADES 4-6 A SEPARATE TEACHER AND CLASSROOM IS MORE SUITABLE. BOTH SEXES MAY BENEFIT BY PARTICIPATION IN THE ACTIVITIES OF SUCH PROGRAMS. PROJECT CONSTRUCTION IS A TYPICAL ACTIVITY INVOLVING SEASONAL, PERSONAL AND ACADEMICALLY-RELATED PROJECTS. SUGGESTIONS FOR ORGANIZING AND EQUIPPING ELEMENTARY INDUSTRIAL ARTS PROGRAMS ARE INCLUDED. (EM)

VT 008 465
TWENTY-EIGHT INDUSTRIAL ARTS FILMS FROM
MCGRAW-HILL.

MCGRAW-HILL BOOK CO., NEW YORK, N.Y. TEXT-
FILM DIV.

E
PUB DATE - ND 8P

DESCRIPTORS - *ANNOTATED BIBLIOGRAPHIES;
*INDUSTRIAL ARTS; *DRAFTING; *WOODWORKING;
*INSTRUCTIONAL FILM

ABSTRACT - EIGHTEEN BLACK AND WHITE 16MM EDUCATIONAL FILMS WHICH ARE CORRELATED WITH TWO TEXTBOOKS ARE ANNOTATED. THE TEXTS ARE "MECHANICAL DRAWING" BY FRENCH AND SVENSEN AND "ENGINEERING DRAWING" BY FRENCH AND VIERCK. TEN OTHER FILMS ARE LISTED FOR WOODWORKING, SHOP SAFETY, AND HAND TOOLS. PRICE, RUNNING TIME, AND ORDER NUMBER ARE INCLUDED. (EM)

VT 008 537
VOCATIONAL INDUSTRIAL DRAFTING. A TEACHER'S
OUTLINE FOR USE IN ORGANIZATION AND
MANAGEMENT OF INSTRUCTION.

MISSISSIPPI STATE DEPT. OF EDUCATION,
JACKSON. CURRICULUM LAB.
CURRICULUM LABORATORY, BOX NU, STATE COLLEGE,
MISSISSIPPI 39762 (\$1.50).
PUB DATE - APR69 87P.

DESCRIPTORS - *CURRICULUM GUIDES; *TRADE AND
INDUSTRIAL EDUCATION; *DRAFTSMEN; GRADE 11;
GRADE 12

ABSTRACT - THIS CURRICULUM GUIDE IS FOR USE
BY TEACHERS OF VOCATIONAL DRAFTING COURSES.
IT WAS DEVELOPED BY A COMMITTEE OF SECONDARY

TEACHERS AND EDITED BY THE STAFF OF A
CURRICULUM MATERIALS LABORATORY. OUTLINES ARE
PROVIDED FOR (1) FUNDAMENTALS OF DRAFTING,
(2) SHEET METAL DRAFTING, (3) DRAFTING MEDIA
AND REPRODUCTION, (4) MACHINE DRAFTING, (5)
ARCHITECTURAL DRAFTING, (6) TOPOGRAPHICAL
DRAFTING AND (7) STRUCTURAL DRAFTING.
SUPPLEMENTARY MATERIALS INCLUDE SAMPLE
INSTRUCTIONAL SHEETS AND INFORMATION ABOUT
THE SURVEY ON WHICH THIS GUIDE IS BASED.
TEACHERS SHOULD BE CERTIFIED VOCATIONAL
TEACHERS AND STUDENTS SHOULD HAVE AN
EXPRESSED INTEREST IN DRAFTING AS A VOCATION.
(EM)

VT 008 562 ED 033 195
MITCHELL, E.F., AND OTHERS
INDUSTRIAL ARTS AND VOCATIONAL EDUCATION IN
GRADES K-12. FINAL REPORT.

LEFLORE COUNTY SCHOOLS, GREENWOOD, MISS.
PUB DATE - OCT68 99P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; JUNIOR HIGH SCHOOLS; SECONDARY SCHOOLS;
ELEMENTARY GRADES; *VOCATIONAL EDUCATION;
PROGRAM DEVELOPMENT; COMPREHENSIVE PROGRAMS
IDENTIFIERS - LEFLORE COUNTY MISSISSIPPI
SCHOOLS; GREENWOOD; MISSISSIPPI

ABSTRACT - THIS CURRICULUM GUIDE,
ENCOMPASSING A TOTAL INDUSTRIAL ARTS AND
VOCATIONAL PROGRAM FOR GRADES K-12 FOR THE
LEFLORE COUNTY SCHOOLS, GREENWOOD,
MISSISSIPPI, WAS DEVELOPED BY A LOCAL STAFF
OF EDUCATORS. SPECIAL EMPHASIS IS GIVEN TO
INDUSTRIAL ARTS IN GRADES K-6, VOCATIONAL
ORIENTATION IN THE SEVENTH GRADE,
INTRODUCTION TO MODERN INDUSTRY IN THE NINTH
GRADE, AND VOCATIONAL PART-TIME COOPERATIVE
EDUCATION IN THE 12TH GRADE. MAJOR DIVISIONS
INCLUDE: (1) INTRODUCTION, (2) ELEMENTARY
INDUSTRIAL ARTS (K-6), (3) JUNIOR HIGH SCHOOL
INDUSTRIAL ARTS, (4) INDUSTRIAL ARTS AND
VOCATIONAL EDUCATION IN HIGH SCHOOLS, AND (5)
SUMMARY AND RECOMMENDATIONS. APPENDED
MATERIALS INCLUDE A PILOT PROPOSAL FOR
ELEMENTARY SCHOOL, COURSE DESCRIPTIONS AND
OUTLINES FOR ELEMENTARY SCHOOL INDUSTRIAL
ARTS, AND A REPORT ON "INTERPRETATION OF
MODERN INDUSTRY." (GR)

VT 008 664
A GUIDE TO BETTER TEACHING.

MAINE STATE DEPT. OF EDUCATION, AUGUSTA. DIV.
OF VOCATIONAL EDUCATION
PUB DATE - ND 39P.

DESCRIPTORS - *RESOURCE MATERIALS; INDUSTRIAL
ARTS; *INDUSTRIAL ARTS TEACHERS; *CLASSROOM
TECHNIQUES; *TEACHING METHODS; *CLASS
MANAGEMENT; SECONDARY GRADES
IDENTIFIERS - MAINE

ABSTRACT - THE GUIDE, FOR USE BY BEGINNING
INDUSTRIAL ARTS TEACHERS, DESCRIBES THE
ORGANIZATION AND ADMINISTRATION OF INDUSTRIAL
ARTS PROGRAMS. MAJOR SECTIONS ARE: (1) CLASS
ADMINISTRATION, (2) PUPIL PERSONNEL
ORGANIZATION, (3) SHOP RECORDS, (4)
CURRICULUM MATERIALS, AND (5) TEACHING
PROCEDURES AND TECHNIQUES. CHECK LISTS,

IND ARTS

PROCEDURES, FORMS, AND BRIEF DISCUSSIONS ARE INCLUDED FOR THESE TOPICS. (EM)

VT 008 733

DUFFY, JOSEPH W.

POWER: PRIME MOVER OF TECHNOLOGY. LABORATORY MANUAL.

MCNIGHT AND MCNIGHT PUBLISHING CO., ROUTE 66 AND TOWANDA AVENUE, BLOOMINGTON, ILLINOIS 61701.

PUB DATE - 65 144P.

DESCRIPTORS - *LABORATORY MANUALS; *INDUSTRIAL ARTS; *STUDENT PROJECTS; *LABORATORY EXPERIMENTS; INDIVIDUALIZED INSTRUCTION; *POWER MECHANICS; INDUSTRIAL TECHNOLOGY; SECONDARY GRADES; ENGINES; ELECTRIC MOTORS; ENERGY

ABSTRACT - COMPILED BY AN ASSOCIATE PROFESSOR OF INDUSTRIAL ARTS, THIS LABORATORY MANUAL IS FOR USE BY HIGH SCHOOL INDUSTRIAL ARTS STUDENTS ENGAGED IN A STUDY OF POWER AND ITS ROLE IN TECHNOLOGY. IT IS DIVIDED INTO TWO MAJOR SECTIONS, THE FIRST OF WHICH IS A GROUP OF 20 STUDY UNITS KEYED TO THE CHAPTERS OF THE TEXTBOOK, "POWER--THE PRIME MOVER OF TECHNOLOGY." THE SECOND SECTION IS COMPRISED OF 22 ACTIVITIES AND PERFORMANCE PROBLEMS RELATING TO THE INFORMATION COVERED IN PART ONE. THE CONTENTS OF BOTH SECTIONS ARE GROUPED UNDER THE MAJOR TOPICS: (1) DIRECT MANUAL CONVERTERS, (2) EXTERNAL COMBUSTION CONVERTERS, (3) INTERNAL COMBUSTION CONVERTERS, (4) CONVENTIONAL ELECTRICAL CONVERTERS, AND (5) DIRECT ELECTRICAL CONVERTERS. PERFORATED PAGES MAKE THE STUDY UNITS EASILY DETACHABLE SO THAT THEY MAY BE TURNED IN TO THE INSTRUCTOR OR INCLUDED IN STUDENT REFERENCE NOTEBOOKS. THE PROBLEM SECTION PROVIDES FOR ACTIVITIES IN EXPERIMENTATION, MODEL PREPARATION, AND DESIGN AND CONSTRUCTION OF POWER CONVERTERS. STUDENTS SHOULD SELECT AND UTILIZE THESE ACCORDING TO THEIR OWN INTERESTS AND ABILITIES. SUPPLEMENTARY MATERIALS INCLUDE TABLES OF DECIMAL EQUIVALENTS, TRIGONOMETRIC FUNCTIONS, PERIODIC TABLE OF CHEMICAL ELEMENTS, LIST OF CHEMICAL ELEMENTS AND SYMBOLS, AND SELECTED REFERENCES FOR EACH MAJOR TOPIC. THE RELATED TEACHER'S MANUAL IS AVAILABLE AS VT 008 734, IN THIS ISSUE. (AW)

VT 008 734

DUFFY, JOSEPH W.

POWER: PRIME MOVER OF TECHNOLOGY. TEACHER'S MANUAL.

MCNIGHT AND MCNIGHT PUBLISHING CO., ROUTE 66 AND TOWANDA AVENUE, BLOOMINGTON, ILLINOIS 61701.

PUB DATE - 65 141P.

DESCRIPTORS - *CURRICULUM GUIDES; *COURSE ORGANIZATION; *INDUSTRIAL ARTS; INDUSTRIAL TECHNOLOGY; SECONDARY GRADES; STUDENT PROJECTS; INDIVIDUALIZED INSTRUCTION; *POWER MECHANICS; ENERGY

ABSTRACT - THIS TEACHER'S MANUAL IS DESIGNED TO AID THE HIGH SCHOOL INDUSTRIAL ARTS TEACHER IN ORGANIZING AND IMPLEMENTING A

COURSE IN POWER TECHNOLOGY. WRITTEN BY AN ASSOCIATE PROFESSOR OF INDUSTRIAL ARTS, THE MANUAL PROVIDES A SUGGESTED COURSE OUTLINE AND SHOP LAYOUT, AS WELL AS A COMPILATION OF SCIENTIFIC AND TECHNOLOGICAL INFORMATION TO BE USED SELECTIVELY BY THE INSTRUCTOR TO MEET THE NEEDS AND ABILITIES OF THE CLASS AND THE INDIVIDUAL STUDENTS. GENERAL OBJECTIVES OF THE COURSE ARE TO ACQUAINT STUDENTS WITH (1) BASIC SCIENTIFIC PRINCIPLES OF POWER, (2) INDUSTRIAL USES OF POWER, (3) CONVERSION OF ENERGY FROM ONE FORM TO ANOTHER, (4) SOCIAL-ECONOMIC IMPLICATIONS OF POWER TECHNOLOGY, (5) RELATED INDUSTRIAL AND OCCUPATIONAL AREAS, AND (6) RELATED PRINCIPLES IN MATHEMATICS AND SCIENCE. UNITS ARE PRESENTED ON: (1) MACHINES, (2) HEAT AS A FORM OF ENERGY, (3) STEAM AND HEAT ENGINES, (4) INTERNAL COMBUSTION AND HEAT ENGINES, (5) GAS TURBINES AND THRUST, (6) ROCKETS, (7) ELECTRICITY, (8) MAGNETISM, AND (9) ALTERNATING CURRENT. SECTIONS ON FACILITIES, INCLUDING EQUIPMENT AND MACHINERY, AND AUDIO-VISUAL MATERIALS ARE ALSO INCLUDED. THE MANUAL IS ILLUSTRATED WITH PHOTOGRAPHS, CHARTS, GRAPHS, AND DIAGRAMS. THE RELATED STUDENT LABORATORY MANUAL IS AVAILABLE AS VT 008 733 (IN THIS ISSUE). (AW)

VT 008 796

ORGANIZATION AND ADMINISTRATION FORMS FOR INDUSTRIAL ARTS.

INSTRUCTIONAL MATERIALS SERVICE, KENNEDY, MINN.

IMS-SERIES 1000

INSTRUCTIONAL MATERIALS SERVICE, P.O. BOX 244, KENNEDY, MINNESOTA 56733.

PUB DATE - ND 34P.

DESCRIPTORS - *INDUSTRIAL ARTS; *RECORDS (FORMS); *SECONDARY SCHOOLS; *PROGRAM ADMINISTRATION; ORGANIZATION

ABSTRACT - THIS SERIES OF ORGANIZATION AND ADMINISTRATION FORMS ARE DESIGNED FOR USE IN JUNIOR AND SENIOR HIGH SCHOOL INDUSTRIAL ARTS PROGRAMS, AND IN COURSES IN ORGANIZATION AND ADMINISTRATION OF INDUSTRIAL ARTS AT THE TEACHER EDUCATION LEVEL. SAMPLES OF 25 DIFFERENT FORMS ARE SHOWN, AND AN ORDER FORM AND PRICE LIST ARE INCLUDED. (GR)

VT 008 972

INDUSTRIAL ARTS CURRICULUM GUIDE: INDUSTRIAL ARTS, 1968-1969.

ORANGE COUNTY SCHOOL BOARD, ORLANDO, FLA. FLORIDA STATE DEPT. OF EDUCATION, TALLAHASSEE

PUB DATE - 69 109P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; JUNIOR HIGH SCHOOLS; *COMMUNICATIONS; *MANUFACTURING; *POWER MECHANICS; COURSE CONTENT; COURSE ORGANIZATION; LEARNING ACTIVITIES; INSTRUCTIONAL AIDS; EDUCATIONAL FACILITIES; EDUCATIONAL EQUIPMENT

ABSTRACT - CONTENT FOR THE JUNIOR HIGH SCHOOL INDUSTRIAL ARTS PROGRAM PRESENTED IN THIS CURRICULUM GUIDE WAS DEVELOPED BY A COMMITTEE OF TEACHERS, STATE SUPERVISORS, AND CONSULTANTS THROUGH AN ANALYSIS OF THE

MANUFACTURING, CONSTRUCTION, COMMUNICATION, TRANSPORTATION, POWER, SERVICE, RESEARCH, AND MANAGEMENT CATEGORIES OF AMERICAN INDUSTRY. A ONE SEMESTER COURSE IN COMMUNICATIONS INTRODUCES THE 7TH GRADE STUDENT TO THE WAYS AND MEANS BY WHICH MAN HAS EMPLOYED AND DEVELOPED TECHNOLOGY TO AID HIM IN BETTER COMMUNICATION OF IDEAS AND INFORMATION. THE ONE SEMESTER 8TH GRADE COURSE IN MANUFACTURING INTRODUCES THE STUDENT TO THE WAYS AND MEANS BY WHICH MAN OBTAINS AND CHANGES THE NATURAL RESOURCES TO PRODUCE HIS MATERIAL WELFARE. THE 9TH GRADE FULL YEAR COURSE OF STUDY IN POWER MECHANICS IS DESIGNED TO INTRODUCE THE STUDENT TO MAN'S USE OF ENERGY TO PRODUCE POWER TO MAKE HIS WORK EASIER AND TO MOVE HIMSELF AND THE THINGS HE PRODUCES. COURSE CONTENT TOPIC TITLES OUTLINED UNDER THE HEADINGS OF INFORMATION TOPICS ARE INTENDED TO IDENTIFY LESSONS OR UNITS OF INSTRUCTION TO BE PREPARED AND PRESENTED. OTHER OUTLINE COLUMNS TITLED STUDENT ACTIVITY, TEACHER NOTES, AND INSTRUCTIONAL AIDS PRESENT INFORMATION HELPFUL IN PREPARING LESSON PLANS. EACH COURSE OF STUDY INCLUDES A SUGGESTED QUALITY FLOORPLAN AND A LIST OF EDUCATIONAL SUPPLIES AND EQUIPMENT. (HC)

VT 008 993
WOODWORKING: VOCATIONAL-INDUSTRIAL EDUCATION CURRICULUM GUIDE.

DALLAS INDEPENDENT SCHOOL DISTRICT, TEXAS
DALLAS INDEPENDENT SCHOOL DISTRICT, 3700 POSS AVENUE, DALLAS, TEXAS 75204 (\$2.72).
PUB DATE - 67 82P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *WOODWORKING; *SECONDARY GRADES; CURRICULUM PLANNING

ABSTRACT - DEVELOPED BY A TEACHER CURRICULUM SPECIALIST AND TESTED FOR 1-YEAR IN MONOGRAPH FORM BEFORE PUBLICATION, THIS CURRICULUM GUIDE IS FOR TEACHER USE IN PLANNING A WOODWORKING CLUSTER FOR THE SENIOR AND JUNIOR HIGH SCHOOL LEVEL. THE CONTENT IS COMPRISED OF SIX MODEL WOODWORKING COURSES COVERING GRADES 7 THROUGH 12. IN THE FIRST TWO, THE PRIMARY OBJECTIVES ARE TO HELP STUDENTS DETERMINE WHETHER OR NOT THEIR APTITUDES AND INTERESTS LIE IN WOODWORKING AND TO ACQUAINT THEM WITH BASIC WOODWORKING SKILLS. THE LAST FOUR UNITS, ON THE HIGH SCHOOL LEVEL, ARE DESIGNED TO ASSIST THE STUDENT IN ACQUIRING THE TECHNICAL KNOWLEDGE, EXPERIENCE, AND SKILLS NECESSARY FOR A CAREER IN WOODWORKING. EACH UNIT CONTAINS BRIEF DESCRIPTIVE INFORMATION, COURSE OBJECTIVES, SUGGESTED LEARNING EXPERIENCES AND TEACHING METHODS, AND SELECTED REFERENCES AND AUDIO-VISUAL AIDS. THE BULLETIN IS ILLUSTRATED WITH PHOTOGRAPHS. (AW)

VT 009 072 ED 031 594
GEBHART, RICHARD P.
DEVELOPING AMERICAN INDUSTRY COURSES FOR THE SECONDARY SCHOOL.

STOUT STATE UNIV., MENOMONIE, WIS.
DEC-5-85-060 08
BR-5-0058

AMERICAN INDUSTRY PROJECT, STOUT STATE UNIVERSITY, MENOMONIE, WISCONSIN 54751 (SINGLE COPIES NO CHARGE).
PUB DATE - MAR68 33P.

DESCRIPTORS - *INDUSTRIAL ARTS; *HIGH SCHOOL CURRICULUM; *CONCEPTUAL SCHEMES; *PROGRAM DESCRIPTIONS; INDUSTRY; *CURRICULUM DEVELOPMENT; COURSE DESCRIPTIONS; TEACHING GUIDES; MODELS; ILLUSTRATIONS; EDUCATIONAL INNOVATION; MATERIAL DEVELOPMENT; INSTRUCTIONAL MATERIALS; PROGRAM DEVELOPMENT; PROGRAM DESIGN
IDENTIFIERS - *PROJECT AMERICAN INDUSTRY

ABSTRACT - THE CONSTRUCTION OF A CONCEPTUAL FRAMEWORK OF INDUSTRY IN THE UNITED STATES AND THE DEVELOPMENT OF A COMPLETELY NEW SECONDARY CURRICULUM, CALLED AMERICAN INDUSTRY, ARE REPORTED. MAJOR EMPHASIS IS PLACED ON THE NEED OF THE SECONDARY SCHOOL TO AID ALL PEOPLE IN DEVELOPING AN UNDERSTANDING OF AMERICAN INDUSTRY, THE PROCEDURE USED IN IDENTIFYING THOSE KNOWLEDGES NECESSARY TO UNDERSTAND AMERICAN INDUSTRY, THE SPECIFICATION OF BEHAVIORAL OBJECTIVES, THE DEVELOPMENT OF A LOGICAL COURSE SEQUENCE, AND THE DEVELOPMENT OF INSTRUCTIONAL MATERIALS FOR TEACHER AND STUDENT. THE PROJECT FORMALLY DEFINED AMERICAN INDUSTRY AS "AN INSTITUTION IN OUR SOCIETY WHICH, INTENDING TO MAKE A MONETARY PROFIT, APPLIES KNOWLEDGE AND UTILIZES HUMAN AND NATURAL RESOURCES TO PRODUCE GOODS OR SERVICES TO MEET THE NEEDS OF MAN." MODELS AND ILLUSTRATIONS ACCOMPANY THE NARRATIVE DESCRIPTION OF THE DEVELOPMENT OF THE CONCEPTUAL FRAMEWORK, THE CURRICULUM MATERIALS, AND THE GENERAL OPERATING CHARACTERISTICS OF THE COURSE. (CH)

VT 009 081
BARRON, LAWRENCE, AND OTHERS
A SUGGESTED GUIDE FOR TEACHING SLOW LEARNERS IN INDUSTRIAL ARTS IN THE PUBLIC SCHOOLS.

MAINE STATE DEPT. OF EDUCATION, AUGUSTA
STATE DEPARTMENT OF EDUCATION, BUREAU OF VOCATIONAL EDUCATION, EDUCATION BUILDING, AUGUSTA, MAINE 04330 (NO CHARGE).
PUB DATE - SEP66 42P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL EDUCATION; *LOW ABILITY STUDENTS; *SLOW LEARNERS; SECONDARY GRADES; OCCUPATIONAL CLUSTERS; *JOB SKILLS; BUILDING TRADES; AUTO MECHANICS; MANUFACTURING INDUSTRY; WELDERS

ABSTRACT - DEVELOPED THROUGH A WORKSHOP OF HIGH SCHOOL INDUSTRIAL ARTS INSTRUCTORS AND EDUCATIONAL ADMINISTRATORS, THIS GUIDE IS DESIGNED TO AID HIGH SCHOOL INDUSTRIAL ARTS TEACHERS IN CONDUCTING SPECIAL OCCUPATIONAL CLASSES FOR SLOW LEARNERS. THE MATERIAL IS RECOMMENDED FOR USE WITH SMALL CLASSES OF MALE STUDENTS WITH I.Q.'S RANGING FROM 75-90. THE CONTENT INCLUDES SUGGESTIONS FOR TEACHERS, A STATEMENT OF OBJECTIVES, AND TOPICAL OUTLINES OF A VARIETY OF OCCUPATIONAL SKILLS TO BE TAUGHT FROM GRADES 7 THROUGH 12. OCCUPATIONS OUTLINED ARE: (1) PRODUCTION OF HOME ACCESSORIES (GRADE 7), (2) BUILDING REPAIRS AND MAINTENANCE AND SMALL GAS ENGINE SERVICING (GRADE 9, TWO UNITS), (3) INDUSTRIAL MACHINING TECHNIQUES (GRADE 10),

IND ARTS

41

(4) BUILDING TRADES (GRADE 11), AND (5) AUTOMOTIVE SERVICE STATION ATTENDANT (GRADE 12). NO EIGHTH GRADE PROGRAM HAD BEEN DEVELOPED AT TIME OF PUBLICATION. THE MIMEOGRAPHED OUTLINES PROVIDE BRIEF DESCRIPTIVE INFORMATION FOR EACH OCCUPATION, JOBS TO BE PERFORMED, AND ESSENTIAL RELATED INFORMATION. THE SUBJECT MATTER SHOULD BE USED SELECTIVELY TO MEET THE NEEDS OF THE GROUP AND THE INDIVIDUAL STUDENTS. (AW)

VT 009 194
SENIOR HIGH SCHOOL INDUSTRIAL ARTS.

WINSTON-SALEM/FORSYTH COUNTY SCHOOLS, N.C.
WINSTON-SALEM/FORSYTH COUNTY SCHOOLS, P.O.
BOX 2513, WINSTON-SALEM, NORTH CAROLINA
(\$3.00).
PUB DATE - 67 219P.

DESCRIPTORS - *INDUSTRIAL ARTS; *CURRICULUM GUIDES; HIGH SCHOOLS; SECONDARY GRADES; COURSE OBJECTIVES; BIBLIOGRAPHIES; INSTRUCTIONAL MATERIALS; COURSE ORGANIZATION IDENTIFIERS - *WINSTON SALEM FORSYTH COUNTY SCHOOLS; NORTH CAROLINA

ABSTRACT - THIS CURRICULUM GUIDE IS FOR TEACHER USE IN COURSE AND LESSON PLANNING FOR HIGH SCHOOL INDUSTRIAL ARTS DRAFTING, HOME PLANNING, HOUSEHOLD MECHANICS, GENERAL SHOP, ELECTRICITY AND ELECTRONICS, METALWORKING, AND MACHINE WOODWORKING. THE TOPICAL OUTLINE WAS DEVELOPED BY A COMMITTEE OF TEACHERS AND SUPERVISORS AT THE LOCAL LEVEL AFTER A 2-YEAR STUDY OF THE CURRICULUM. THE CONTENT OBJECTIVES ARE DESIGNED TO IMPROVE THE TOTAL INSTRUCTIONAL PROGRAM AND STILL PROVIDE FLEXIBILITY TO MEET THE NEEDS OF INDIVIDUAL SCHOOLS. THE MATERIAL FOR EACH COURSE IS DESIGNED FOR 180 SCHOOL DAYS OF 55 MINUTE PERIODS WITH THE EXCEPTION OF HOME PLANNING AND HOUSEHOLD MECHANICS WHICH ARE 1-SEMESTER COURSES. EACH COURSE HAS BEEN DIVIDED INTO UNITS OF INSTRUCTION LISTING: (1) COURSE DESCRIPTION, (2) OBJECTIVES, (3) SCOPE OF COURSE, (4) ASSIGNMENTS, (5) BIBLIOGRAPHY OF REFERENCES, AND (6) EQUIPMENT. SUPPLEMENTAL MATERIAL INCLUDES A DEFINITION OF AND OBJECTIVES FOR INDUSTRIAL ARTS. (GR)

VT 009 281
INTERPRETING INDUSTRY THROUGH LINE PRODUCTION.

MAINE STATE DEPT. OF EDUCATION, AUGUSTA.
BUREAU OF VOCATIONAL EDUCATION
GORHAM STATE TEACHERS COLL., MAINE.
INDUSTRIAL ARTS DEPT.
INDUSTRIAL ARTS EDUCATION, MAINE STATE
DEPARTMENT OF EDUCATION, EDUCATION BUILDING,
AUGUSTA, MAINE 04330 (NO CHARGE).
PUB DATE - ND 76P.

DESCRIPTORS - *TEACHING GUIDES; *INDUSTRIAL ARTS; *JUNIOR HIGH SCHOOLS; *MASS PRODUCTION; STUDENT PROJECTS; BIBLIOGRAPHIES; *INDUSTRY; COURSE OBJECTIVES; INSTRUCTIONAL MATERIALS

ABSTRACT - THIS TEACHING GUIDE, DEVELOPED BY COLLEGE STUDENTS, IS FOR TEACHER USE IN COURSE AND LESSON PLANNING OF LINE PRODUCTION TECHNIQUES FOR GRADES 6 THROUGH 9 AND

REQUIRES FIVE 50-MINUTE CLASSES FOR 9 WEEKS OF STUDY. SOME UNITS ARE: (1) OBJECTIVES, (2) DRAWINGS OF PARTS, (3) JIGS AND FIXTURES, (4) PROCEDURE FOR MANUFACTURING PARTS, (5) PROCEDURE FOR ASSEMBLY, (6) BIBLIOGRAPHY, (7) TOOL LIST, (8) MATERIAL AND SUPPLY LIST, (9) TEACHING AIDS OR DEVICES, (10) LIST OF FILMS, (11) LIST OF LESSONS TO BE TAUGHT, (12) SAFETY CHECK LISTS, (13) FINANCIAL REPORT FOR A MODEL COMPANY, AND (14) EVALUATION TECHNIQUES. (GR)

VT 009 288
BROWN, ALBERT, AND OTHERS
A TECHNICAL DRAWING COURSE FOR COLLEGE-
PREPARATORY STUDENTS.

INDUSTRIAL ARTS EDUCATION, MAINE STATE
DEPARTMENT OF EDUCATION, EDUCATION BUILDING,
AUGUSTA, MAINE 04330 (NO CHARGE).
PUB DATE - ND 19P.

DESCRIPTORS - *INDUSTRIAL ARTS; *DRAFTING; *COLLEGE BOUND STUDENTS; CURRICULUM GUIDES; COURSE OBJECTIVES; SENIOR HIGH SCHOOLS; SECONDARY SCHOOL STUDENTS; *TEACHING GUIDES IDENTIFIERS - MAINE STATE DEPARTMENT OF EDUCATION; AUGUSTA

ABSTRACT - A STATE-LEVEL COMMITTEE OF TEACHERS DEVELOPED THIS GUIDE FOR TEACHER USE IN PLANNING A TECHNICAL DRAWING COURSE FOR COLLEGE PREPARATORY STUDENTS IN INDUSTRIAL ARTS, GRADES 11 AND 12, SO THAT THESE STUDENTS WOULD BE EQUIPPED TO SUCCESSFULLY COMPLETE ENGINEERING COLLEGE WORK. THE CONTENTS ARE ORGANIZED AS FOLLOWS: (1) OBJECTIVES, (2) FREEHAND SKETCHING, (3) ORTHOGRAPHIC PROJECTION, (4) WORKING DRAWINGS, (5) PICTORIAL, (6) DEVELOPMENT AND INTERSECTIONS, AND (7) SUGGESTED TEXTS. EACH UNIT LISTS THE OPERATIONS A PUPIL SHOULD LEARN AND THE INFORMATION HE SHOULD KNOW. THE COURSE IS DESIGNED FOR APPROXIMATELY 5 HOURS PER WEEK FOR 72 WEEKS (2 SCHOOL YEARS). (GR)

VT 009 306
LOUGHRAN, BERNICE E.; BAILEY, ROGER S.
APPLIED DESIGN: PLANNING TO PRODUCTION AND PRINCIPLES AND ELEMENTS. (TWO PARTS).

CALIFORNIA STATE POLYTECHNIC COLL., SAN LUIS
OBISPO. DEPT. OF EDUCATION
CALIFORNIA STATE DEPT. OF EDUCATION,
SACRAMENTO
VOCATIONAL EDUCATION PRODUCTIONS, CALIFORNIA
STATE POLYTECHNIC COLLEGE, SAN LUIS OBISPO,
CALIFORNIA 93401 (\$14.50 FOR 2 ILLUSTRATED
SCRIPTS AND 2 FILMSTRIPS).
PUB DATE - 68 52P.

DESCRIPTORS - *FILMSTRIPS; *SCRIPTS; *INDUSTRIAL ARTS; *DESIGN CRAFTS; *ART APPRECIATION; SECONDARY GRADES; POST SECONDARY GRADES; ART EDUCATION; TEACHING GUIDES

ABSTRACT - THESE TWO ILLUSTRATED MANUALS AND THEIR COMPANION FILMSTRIPS WERE DEVELOPED BY COLLEGE FACULTY IN COOPERATION WITH HIGH SCHOOL TEACHERS. VOCATIONAL TEACHERS IN HIGH SCHOOL AND JUNIOR COLLEGES MAY USE THESE MATERIALS WITH STUDENTS OF AVERAGE ABILITY

FOR ONE OR TWO CLASS PERIODS OF VIEWING AND DISCUSSION. PRINCIPLES AND ELEMENTS OF GOOD DESIGN ARE PRESENTED IN A 42-FRAME FILMSTRIP COVERING: (1) THE VALUE OF GOOD DESIGN, (2) POOR DESIGN, (3) APPLICATION OF DESIGN PRINCIPALS, (4) ELEMENTS OF ART, (5) IMPROVEMENT THROUGH DESIGN CHANGES, AND (6) GOOD DESIGN GIVES LONG-LASTING PLEASURE. THE 52-FRAME FILMSTRIP DISCUSSING PLANNING TO PRODUCTION INCLUDES: (1) PLANNING A WELL-DESIGNED PROJECT, (2) DESIGNING WOODEN SALAD SERVERS, (3) DESIGNING COFFEE MUGS, (4) DESIGNING METAL CANDLE HOLDERS, AND (5) DESIGNING WOODEN CANDLESTICKS FOR THE LATHE. SUGGESTIONS ARE GIVEN TO THE INSTRUCTOR FOR USE IN CONDUCTING DISCUSSION. ADDITIONAL RESOURCE INFORMATION WOULD BE DESIRABLE WHEN STUDYING THIS UNIT. (DM)

VT 009 316
STRASSER, ED
USING THE ELECTRONIC WOOD WELDER.

CALIFORNIA STATE POLYTECHNIC COLL., SAN LUIS OBISPO, DEPT. OF TECHNICAL ARTS
CALIFORNIA STATE DEPT. OF EDUCATION,
SACRAMENTO
VOCATIONAL EDUCATION PRODUCTIONS, CALIFORNIA STATE POLYTECHNIC COLLEGE, SAN LUIS OBISPO, CALIFORNIA 93401 (\$5.00 FOR ILLUSTRATED SCRIPT AND FILMSTRIP).
PUB DATE - 65 19P.

DESCRIPTORS - *FILMSTRIPS; *SCRIPTS;
*INDUSTRIAL EDUCATION; *WOODWORKING;
SECONDARY GRADES; POST SECONDARY GRADES
IDENTIFIERS - *ELECTRONIC WOOD WELDING

ABSTRACT - DEVELOPED BY COLLEGE FACULTY AND HIGH SCHOOL TEACHERS, THIS 64-FRAME COLOR FILMSTRIP AND COMPANION SCRIPT IS FOR USE IN CLASSES OF VOCATIONAL AGRICULTURE IN HIGH SCHOOLS AND JUNIOR COLLEGES. SUBJECT-MATTER SPECIALISTS AND TEACHERS REVIEWED THE 1- TO 2-HOUR UNIT PRIOR TO ITS PUBLICATION. THE CONTENT DISCUSSES THE UTILIZATION OF THE ELECTRONIC WOOD-WELDER IN DRYING GLUE JOINTS: (1) HOW GLUES DRY, (2) DIELECTRIC HEATING, (3) GLUES FOR USE WITH THE WOOD WELDER, (4) ORIENTATION TO THE WOOD WELDER, (5) PREPARING THE WOOD WELDER FOR OPERATION, (6) PREPARING THE GLUE JOINT, (7) WELDING THE GLUE JOINT, (8) CAUSES OF ARCING, (9) SAFETY POINTS, (10) INDUSTRIAL USES, AND (11) BENEFITS OF WOOD WELDING. STUDENTS SHOULD BE OF AVERAGE ABILITY. ADDITIONAL SOURCE INFORMATION IS DESIRABLE WHEN STUDYING THE TOPIC. (EM)

VT 009 658
GUIDELINES FOR ESTABLISHING AND EVALUATING DRAFTING AND DESIGN TECHNOLOGY PROGRAMS.

FLORIDA STATE DEPT. OF EDUCATION,
TALLAHASSEE, TECHNICAL AND HEALTH OCCUPATIONS
EDUCATION SECTION
PUB DATE - JAN 68 21P.

DESCRIPTORS - *DRAFTING; *PROGRAM CONTENT;
PROGRAM DESCRIPTIONS; *PROGRAM EVALUATION;
PROGRAM PLANNING; *PROGRAM GUIDES; VOCATIONAL
EDUCATION

ABSTRACT - TO COMMUNICATE TO SCHOOL

OFFICIALS, PROGRAM AND FACILITY PLANNERS, AND INSTRUCTORS IN TECHNICAL EDUCATION, THE ESSENTIAL CONCEPTS AND REQUIREMENTS FOR AN EFFECTIVE PROGRAM OF CRAFTING AND DESIGN TECHNOLOGY. THIS GUIDE OUTLINES A PROGRAM DESIGNED TO MEET THE TECHNICIAN ENTRY LEVEL REQUIREMENTS OF INDUSTRY. INCLUDED ARE: (1) OVERVIEW, (2) PURPOSE, (3) OBJECTIVES, (4) GENERAL REQUIREMENTS, (5) ADMISSION REQUIREMENTS, (6) PROGRAM OPERATION, (7) LENGTH OF PROGRAM, (8) CURRICULUM, (9) PHYSICAL FACILITIES AND EQUIPMENT, (10) CLASSROOM EDUCATIONAL SPECIFICATIONS, (11) MATERIALS TESTING EQUIPMENT, (12) FUTURE TRENDS, (13) FACULTY QUALIFICATIONS, (14) GENERAL CRITERIA FOR PROGRAM ESTABLISHMENT, AND (15) OCCUPATIONAL EMPLOYMENT CLUSTER. A BIBLIOGRAPHY IS APPENDED. (GR)

VT 009 674
POWER MECHANICS: VOCATIONAL AND INDUSTRIAL EDUCATION.

DALLAS INDEPENDENT SCHOOL DISTRICT, TEX.
DALLAS INDEPENDENT SCHOOL DISTRICT, 3700 ROSS
AVENUE, DALLAS, TEXAS 75204 (\$2.73).
PUB DATE - 66 69P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
EDUCATION; *POWER MECHANICS; TEACHING GUIDES;
SECONDARY GRADES

ABSTRACT - DEVELOPED BY TEACHERS OF POWER MECHANICS IN CONJUNCTION WITH THE DEPARTMENT OF VOCATIONAL-INDUSTRIAL EDUCATION OF THE DALLAS INDEPENDENT SCHOOL DISTRICT, TEXAS, THIS CURRICULUM GUIDE IS FOR USE BY INDUSTRIAL ARTS TEACHERS, COUNSELORS, AND SUPERVISORS IN PLANNING AND IMPLEMENTING COURSES IN POWER MECHANICS FOR GRADES 9-12. INTRODUCTORY INFORMATION ON THE PURPOSES, SCOPE, AND EXPECTED OUTCOME OF EACH UNIT IS FOLLOWED BY BRIEF OUTLINES OF "POWER MECHANICS 1 AND 2" AND "POWER MECHANICS 3 AND 4," WITH EACH OUTLINE COVERING SKILLS AND KNOWLEDGE TO BE DEVELOPED, TEACHING SUGGESTIONS, SUGGESTED PROJECT IDEAS, AND MATERIALS AND RESOURCES. NUMEROUS PHOTOGRAPHS ILLUSTRATE THE MANUAL. RECOMMENDED TIME ALLOTMENT FOR COVERING THE MATERIAL IS 55 MINUTES PER DAY. (AW)

VT 009 704
ROYE, CHARLES W.
ARTS AND CRAFTS FOR K TO 6.

LEFLORE COUNTY SCHOOL DISTRICT, GREENWOOD,
MISS.
LEFLORE COUNTY SCHOOLS, HIGHWAY 82 WEST,
GREENWOOD, MISSISSIPPI 38930 (\$2.00).
PUB DATE - 69 33P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; *PREVOCATIONAL EDUCATION; *CURRICULUM
PLANNING; ELEMENTARY GRADES
IDENTIFIERS - *ARTS AND CRAFTS

ABSTRACT - INDIVIDUALLY DEVELOPED AND PILOT TESTED WITH APPROXIMATELY 400 STUDENTS, THIS CURRICULUM GUIDE IS FOR TEACHER USE IN PLANNING PREVOCATIONAL COURSES IN ARTS AND CRAFTS FOR GRADES K-6. CONTENT INCLUDES: (1) STATEMENT OF PHILOSOPHY, (2) PURPOSES, (3)

OBJECTIVES OF THE PROGRAM, (4) INFORMATION ON THE TEACHING STAFF AND CONSULTANTS, (5) NECESSARY FACILITIES AND TOOLS, (6) SUGGESTIONS FOR IN-SERVICE TEACHING TRAINING, (7) REFERENCE LIST, AND (8) THE PROPOSED CURRICULUM. THE CURRICULUM SECTION PROVIDES A BASIC OUTLINE OF POSSIBLE PROJECTS AND ACTIVITIES THAT MIGHT BE USED IN EACH GRADE LEVEL FROM K TO 6 FOR THE SUBJECT AREAS OF: (1) HEALTH AND SAFETY, (2) COMMUNICATIVE ARTS, (3) MATHEMATICS, (4) SCIENCE, (5) MUSIC, AND THE ARTS, AND (6) CITIZENSHIP AND SOCIAL STUDIES. THE MATERIAL SHOULD BE USED SELECTIVELY AND ADAPTED TO LOCAL NEEDS BY THE INDIVIDUAL CLASSROOM TEACHER. (AW)

VT 009 706

METALWORKING; VOCATIONAL-INDUSTRIAL EDUCATION CURRICULUM GUIDE. CURRICULUM BULLETIN SERIES.

DALLAS INDEPENDENT SCHOOL DISTRICT, TEX.
DALLAS INDEPENDENT SCHOOL DISTRICT, 3700 ROSS AVENUE, DALLAS, TEXAS 75204 (\$2.73).
PUB DATE - 67 110P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL EDUCATION; *METAL WORKING OCCUPATIONS; SECONDARY GRADES; *METALS

ABSTRACT - THIS CURRICULUM GUIDE WAS DEVELOPED BY TEACHERS OF METALWORKING IN CONJUNCTION WITH THE DEPARTMENT OF VOCATIONAL-INDUSTRIAL EDUCATION OF THE DALLAS INDEPENDENT SCHOOL DISTRICT, DALLAS, TEXAS, FOR USE BY LOCAL INDUSTRIAL ARTS TEACHERS, SUPERVISORS, AND COUNSELORS IN PLANNING AND IMPLEMENTING COURSES IN METALWORKING FOR GRADES 7-12. CONTENTS INCLUDE SIX UNITS: TWO ON EXPLORATORY METALWORKING FOR GRADES 7 AND 8, AND FOUR ON METALWORKING TO BE TAUGHT AT THE SENIOR HIGH SCHOOL LEVEL. UNITS PROVIDE INTRODUCTORY INFORMATION, SCOPE, EXPECTED OUTCOMES, HOURS PER UNIT, PROJECT IDEAS, BIBLIOGRAPHIES, AND OUTLINES LISTING SKILLS AND KNOWLEDGE TO BE DEVELOPED AND TEACHING SUGGESTIONS. NUMEROUS PHOTOGRAPHS ILLUSTRATE THE GUIDE. THE MATERIAL PRESENTED SHOULD BE USED FLEXIBLY AND ADAPTED BY INDIVIDUAL TEACHERS TO FIT PARTICULAR LEARNING SITUATIONS. (AW)

VT 009 779

INDUSTRIAL TESTING; INDUSTRIAL ARTS TEACHING GUIDE.

CUMBERLAND COUNTY INDUSTRIAL ARTS TEACHERS ASSOCIATION, PA.
PENNSYLVANIA STATE DEPT. OF PUBLIC INSTRUCTION, HARRISBURG. BUREAU OF GENERAL AND ACADEMIC EDUCATION
PENNSYLVANIA STATE DEPARTMENT OF PUBLIC INSTRUCTION, BOX 911, HARRISBURG, PENNSYLVANIA 17126.
PUB DATE - 67 25P.

DESCRIPTORS - *INDUSTRIAL ARTS; *INSTRUCTIONAL MATERIALS; *TEACHING GUIDES; TEACHING TECHNIQUES
IDENTIFIERS - *INDUSTRIAL TESTING

ABSTRACT - THIS TEACHING GUIDE, PREPARED BY A COUNTY ORGANIZATION OF INDUSTRIAL ARTS TEACHERS IS FOR USE IN UPGRADING INDUSTRIAL

ARTS OFFERINGS IN MATERIALS TESTING AND CONTAINS THE FOLLOWING OUTLINED MATERIAL: (1) ORGANIZING THE INITIAL INVESTIGATION, INCLUDING TOPICS AND ACTIVITIES RELATING TO PROPERTIES OF MATERIALS, PROCESSES, SELECTING MATERIAL OR PROCESS FOR INVESTIGATION, FORMING TEAMS FOR INVESTIGATION, AND COLLECTING INFORMATION ABOUT MATERIAL OR PROCESS, (2) REPORTING TO CLASS, (3) TESTING METHODS AND EQUIPMENT, (4) ESTABLISHING PROCEDURES OF INQUIRY, AND (5) PRESENTING ORAL REPORTS. REFERENCE LISTS ARE INCLUDED. (GR)

VT 009 867

SAFETY HANDBOOK; A GUIDE FOR INDUSTRIAL ARTS PROGRAMS, AND TRANSPARENCY MASTERS.

CLEMSON UNIV., S.C.

SOUTH CAROLINA STATE DEPT. OF EDUCATION, COLUMBIA. INDUSTRIAL ARTS SECTION
INDUSTRIAL EDUCATION DEPARTMENT, CLEMSON UNIVERSITY, CLEMSON, SOUTH CAROLINA 29631 (LIMIT: ONE PER STATE SUPERVISOR OF INDUSTRIAL EDUCATION).
PUB DATE - 69 78P.

DESCRIPTORS - SAFETY EDUCATION; *LABORATORY SAFETY; SAFETY EQUIPMENT; *INDUSTRIAL ARTS; SCHOOL SHOPS; SCHOOL ACCIDENTS; SUPPLEMENTARY READING MATERIALS; FILMS; FILMSTRIPS; REFERENCE BOOKS; *TRANSPARENCIES; *MANUALS; *UNITS OF STUDY (SUBJECT FIELDS)

ABSTRACT - THIS GUIDE ON SAFETY, DEVELOPED BY A MATERIALS SPECIALIST, IS FOR TEACHER USE IN PLANNING A SAFETY UNIT FOR JUNIOR AND SENIOR HIGH SCHOOL INDUSTRIAL ARTS. THE FIRST SECTION IS DEVOTED TO SAFETY INFORMATION FOR THE TEACHER COVERING: (1) SAFETY RESPONSIBILITIES OF THE SCHOOL ADMINISTRATOR, THE TEACHER, AND THE STUDENT, (2) RECOMMENDATIONS FOR SHOP AND LAB SAFETY, (3) FIRST AID HINTS, AND (4) TEACHER LIABILITY. THE SECOND SECTION IS A UNIT ON GENERAL SAFETY EDUCATION COVERING APPROXIMATELY 40 MINUTES WHEN USED WITH THE 31 TRANSPARENCIES INCLUDED WITH THE DOCUMENT. APPENDED ARE: (1) THE SOUTH CAROLINA EYE PROTECTION LAW, (2) SUGGESTED REFERENCE BOOKS, (3) FILM LIST, (4) FILMSTRIP LIST, (5) NATIONAL STANDARD SCHOOL SHOP SAFETY INSPECTION CHECK LIST, AND (6) TRANSPARENCY LIST. (GR)

VT 009 899

A TENTATIVE GUIDE FOR IMPLEMENTING INDUSTRIAL ARTS EDUCATION. CURRICULUM GUIDE 1.

TULSA PUBLIC SCHOOLS, OKLA. DEPT. OF INDUSTRIAL ARTS AND VOCATIONAL-TECHNICAL EDUCATION
TULSA PUBLIC SCHOOLS, P.O. BOX 45208, TULSA, OKLAHOMA 74145 (\$3.00).
PUB DATE - 69 120P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL EDUCATION; SECONDARY EDUCATION; *ADMINISTRATOR GUIDES; TEACHER RESPONSIBILITY; INDUSTRIAL ARTS TEACHERS; BIBLIOGRAPHIES; RECORDS (FORMS)

ABSTRACT - ONE OF A SERIES DEVELOPED BY A COMMITTEE OF TEACHERS, THIS REVISED

CURRICULUM GUIDE IS FOR TEACHERS, ADMINISTRATORS AND COUNSELORS TO USE WHEN IMPLEMENTING AN INDUSTRIAL ARTS EDUCATION PROGRAM AT THE JUNIOR AND SENIOR HIGH SCHOOL LEVEL. MAJOR TOPICS ARE: (1) GUIDE FOR INSTRUCTORS OF INDUSTRIAL ARTS EDUCATION, (2) THE INDUSTRIAL ARTS CURRICULUM, (3) INDUSTRIAL ARTS EDUCATION CURRICULUM OFFERINGS, (4) IMPLEMENTING INSTRUCTION IN INDUSTRIAL ARTS EDUCATION, (5) OPENING AND CLOSING PROCEDURES FOR THE INSTRUCTORS IN INDUSTRIAL ARTS EDUCATION, (6) SUGGESTIONS FOR INSTRUCTORS, (7) THE INSTRUCTOR IN INDUSTRIAL ARTS EDUCATION, (8) SUPPLEMENTAL MATERIALS FOR INDUSTRIAL ARTS EDUCATION, (9) SAFETY INSTRUCTION IN INDUSTRIAL ARTS EDUCATION, AND (10) FORMS USED IN INDUSTRIAL ARTS EDUCATION. A LIST OF DEFINED TERMS AND A BIBLIOGRAPHY ARE INCLUDED. A RELATED DOCUMENT, "A TENTATIVE GUIDE FOR IMPLEMENTING VOCATIONAL AND TECHNICAL EDUCATION," IS AVAILABLE AS VT 009 894, (ALSO IN THIS ISSUE). (GR)

VT 009 942 ED 035 733

WILLIAMS, WILLIAM A.
AN ACCIDENT PREVENTION PROGRAM FOR SCHOOL SHOPS AND LABORATORIES; A SUGGESTED GUIDE FOR SCHOOL ADMINISTRATORS.

NATIONAL SAFETY COUNCIL, CHICAGO, ILL.
OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
NATIONAL SAFETY COUNCIL, 425 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60611 (\$6.50).
PUB DATE - NO 254P.

DESCRIPTORS - *LABORATORY SAFETY; INDUSTRIAL ARTS; SCHOOL SHOPS; *SCHOOL SAFETY; *SAFETY EDUCATION; NATIONAL ORGANIZATIONS; GUIDELINES; BIBLIOGRAPHIES; *ACCIDENT PREVENTION; LABORATORY MANUALS; *RESOURCE GUIDES
IDENTIFIERS - *NATIONAL SAFETY COUNCIL

ABSTRACT - EFFECTIVE AND REALISTIC PLANNING AND IMPROVEMENT OF THE EDUCATIONAL ENVIRONMENT CAN PREVENT ACCIDENTS AND INJURIES IN SCHOOL SHOPS AND LABORATORIES. THIS GUIDE MAKES SPECIFIC RECOMMENDATIONS FOR ORGANIZING AND ADMINISTERING SUCH A PROGRAM AND SUGGESTS METHODS AND TECHNIQUES FOR IMPLEMENTING THE RECOMMENDATIONS. CHAPTERS COVER ORGANIZING, ADMINISTERING, AND IMPLEMENTING AN ACCIDENT PREVENTION PROGRAM, EDUCATION AND TRAINING FOR ACCIDENT PREVENTION, AND A BIBLIOGRAPHY OF BOOKS, PAMPHLETS, BOOKLETS, PERIODICAL ARTICLES, UNPUBLISHED MATERIALS, VISUAL AIDS, POSTERS AND CHARTS, AND CATALOGS AND DIRECTORIES. APPENDED ARE (1) STATE LEVEL--MASTER PLAN FORMAT FOR ACCIDENT PREVENTION IN SCHOOL SHOPS AND LABORATORIES, (2) LOCAL LEVEL--MASTER PLAN FORMAT FOR ACCIDENT PREVENTION IN SCHOOL SHOPS AND LABORATORIES, (3) AN OUTLINE FOR A SCHOOL SHOP SAFETY PROGRAM, (4) ACKNOWLEDGEMENT OF SAFETY INSTRUCTION AND PLEDGE, (5) SOURCES OF HELPFUL NATIONAL ORGANIZATIONS, (6) MODEL SCHOOL EYE SAFETY LAW, (7) JOB SAFETY ANALYSIS--WORK SHEET, AND (8) NATIONAL STANDARD SCHOOL SHOP SAFETY INSPECTION LIST. (GR)

VT 010 276

SKUSE, HARLAND G.
BASIC ELECTRICITY, THEORY AND PRACTICE.

THOMAS A. EDISON VOCATIONAL AND TECHNICAL HIGH SCHOOL, ELIZABETH, N.J.
RUTGERS, THE STATE UNIV., NEW BRUNSWICK, N.J. CURRICULUM LAB.
VOCATIONAL-TECHNICAL CURRICULUM LABORATORY, RUTGERS UNIVERSITY, 10 SEMINARY PLACE, NEW BRUNSWICK, NEW JERSEY 08903 (\$2.00).
PUB DATE - JUL 64 225P.

DESCRIPTORS - *VOCATIONAL EDUCATION; *ELECTRICITY; *LABORATORY MANUALS; *TEACHING GUIDES; TEACHING PROCEDURES; *LESSON PLANS

ABSTRACT - THE GUIDE PROVIDES BASIC THEORY AND PRACTICE IN ELECTRICITY FOR STUDENT OR TEACHER USE. THE 77 ILLUSTRATED LESSONS, EACH GIVING OBJECTIVE, RELATED INFORMATION, EQUIPMENT (WHEN NEEDED), PROCEDURE AND QUESTIONS, ARE INCLUDED UNDER THE FOLLOWING TOPICS: (1) INTRODUCTION (COVERING GENERAL OCCUPATIONAL INFORMATION AND SAFETY RULES), (2) TOOLS, (3) BASIC SKILLS, (4) ELECTRICAL CONNECTIONS, (5) METERS, (6) OHM'S LAW, (7) BATTERIES, (8) BELL CIRCUITS, (9) ANNUNCIATORS, (10) RELAYS, (11) RESISTANCE DETERMINATION, AND (12) LEAD IDENTIFICATION. ACHIEVEMENT TESTS FOR EACH MAJOR UNIT ARE APPENDED. (GR)

VT 010 290 ED 037 554

DEVELOPMENT AND STRUCTURE OF INDUSTRY: INFORMATION AND JOB SHEETS.

WISCONSIN STATE UNIV., PLATTEVILLE. SCHOOL OF INDUSTRY
INDUSTRIOLOGY PROJECT, DEPARTMENT OF INDUSTRIAL EDUCATION, COLLEGE OF INDUSTRY, WISCONSIN STATE UNIVERSITY, PLATTEVILLE, WISCONSIN 53818 (SET OF FOUR, \$6.50).
PUB DATE - NO 134P.

DESCRIPTORS - *INDUSTRIAL ARTS; *SECONDARY EDUCATION; CLASSROOM MATERIALS; *RESOURCE MATERIALS; CURRICULUM DEVELOPMENT; *INSTRUCTIONAL MATERIALS
IDENTIFIERS - *INDUSTRIOLOGY PROJECT

ABSTRACT - THIS BOOKLET IS THE THIRD IN A SERIES OF FOUR INSTRUCTIONAL AIDS DESIGNED TO IMPLEMENT THE FIRST PHASE OF THE INDUSTRIOLOGY CONCEPT. IN THIS BOOK, 46 INFORMATION SHEETS AND 26 JOB SHEETS COVER THE CONTENT AND ACTIVITIES AS SUGGESTED IN THE TEACHING PLAN (VT 010 313) FOR DEVELOPMENT AND STRUCTURE OF INDUSTRY--THE FIRST PHASE OF THE INDUSTRIOLOGY CONCEPT. EACH SHEET IS ONE OR TWO PAGES IN LENGTH AND CONTAINS DIAGRAMS IF NECESSARY FOR CLARITY. OTHER DOCUMENTS IN THIS SERIES ARE AVAILABLE AS VT 010 313-VT 010 315 (ALSO IN THIS ISSUE). (GR)

VT 010 301

SAFE USE OF HAND AND PORTABLE POWER TOOLS; SAFETY IN INDUSTRY, INSTRUCTOR OUTLINE.

BUREAU OF LABOR STANDARDS (DOL), WASHINGTON, D.C. OFFICE OF OCCUPATIONAL SAFETY.
BULLETIN 293

SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT
PRINTING OFFICE, WASHINGTON, D.C. 20402
(L16.3:293, \$.35).
PUB DATE - 69 26P.

DESCRIPTORS - *TEACHING GUIDES; *INDUSTRIAL
ARTS; *SAFETY EDUCATION; *INDUSTRIAL
EDUCATION; *CHARTS; INDUSTRY; SAFETY; COURSE
CONTENT

ABSTRACT - INTENDED AS A GUIDE IN TEACHING
SAFETY IN INDUSTRY, THIS INSTRUCTOR OUTLINE
WAS DEVELOPED BY STAFF OF THE OFFICE OF
OCCUPATIONAL SAFETY OF THE BUREAU OF LABOR
STANDARDS. WHILE THE GUIDE INCLUDES CHARTS
AND TEACHING TIPS, ADDITIONAL INFORMATION,
MATERIAL, AND ILLUSTRATIONS SHOULD BE
INCLUDED FOR A COMPLETE PRESENTATION SUITABLE
TO THE CONDITIONS, LOCALITY, INDUSTRY, OR
OCCUPATIONAL GROUP. CLASSES SHOULD MEET ONCE
OR TWICE A WEEK IN TWO 50-MINUTE PERIODS FOR
22 WEEKS, AND BE ATTENDED BY 15 TO 20
PARTICIPANTS. (GR)

VT 010 313 ED 037 555
DEVELOPMENT AND STRUCTURE OF INDUSTRY:
TEACHING PLAN AND ACTIVITY PLAN SHEETS.

WISCONSIN STATE UNIV., PLATTEVILLE. COLL. OF
INDUSTRY
INDUSTRIOLOGY PROJECT, DEPARTMENT OF
INDUSTRIAL EDUCATION, COLLEGE OF INDUSTRY,
WISCONSIN STATE UNIVERSITY, PLATTEVILLE,
WISCONSIN 53818 (SET OF FOUR, \$6.50).
PUB DATE - ND 86P.

DESCRIPTORS - *INDUSTRIAL ARTS; *SECONDARY
EDUCATION; CLASSROOM MATERIALS; *RESOURCE
MATERIALS; *TEACHING GUIDES; CURRICULUM
DEVELOPMENT; INSTRUCTIONAL MATERIALS
IDENTIFIERS - *INDUSTRIOLOGY PROJECT

ABSTRACT - THIS GUIDE IS ONE IN A SERIES OF
FOUR INSTRUCTIONAL AIDS DESIGNED TO IMPLEMENT
THE FIRST PHASE OF THE INDUSTRIOLOGY CONCEPT.
THE TEACHING PLAN UTILIZES THE INSTRUCTIONAL
AIDS AS PREPARED AND LISTED FOR THIS PHASE OF
THE PROGRAM, AND PROVIDES ACTIVITY PLANS
DESIGNED TO AID THE TEACHER IN PREPARING FOR
AND CONDUCTING SOME OF THE ACTIVITIES OF THE
TEACHING PLAN. THIS PLAN IS INTENDED TO SERVE
AS A GUIDE FOR THOSE WHO FEEL THE NEED FOR
DIRECTION IN PLANNING AND ORGANIZING THE
CONTENT OF PHASE I, BUT SHOULD BE ADAPTED FOR
USE BY THE INDIVIDUAL INSTRUCTOR. OTHER
DOCUMENTS IN THIS SERIES ARE AVAILABLE AS VT
010 290, VT 010 314, AND VT 010 315 (ALSO IN
THIS ISSUE). (GR)

VT 010 314 ED 037 556
DEVELOPMENT AND STRUCTURE OF INDUSTRY: STUDY
GUIDE.

WISCONSIN STATE UNIV., PLATTEVILLE. SCHOOL OF
INDUSTRY
INDUSTRIOLOGY PROJECT, DEPARTMENT OF
INDUSTRIAL EDUCATION, COLLEGE OF INDUSTRY,
WISCONSIN STATE UNIVERSITY, PLATTEVILLE,
WISCONSIN 53818 (SET OF FOUR, \$6.50).
PUB DATE - ND 107P.

DESCRIPTORS - *INDUSTRIAL ARTS; *SECONDARY
EDUCATION; CLASSROOM MATERIALS; *RESOURCE

MATERIALS; *STUDY GUIDES; BIBLIOGRAPHIES;
*CURRICULUM DEVELOPMENT; INSTRUCTIONAL
MATERIALS
IDENTIFIERS - *INDUSTRIOLOGY PROJECT

ABSTRACT - THE CONCEPT OF INDUSTRIOLOGY IS
BASED ON THE PREMISE THAT CHILDREN SHOULD BE
EXPOSED TO A COMPREHENSIVE STUDY OF INDUSTRY
IN EXISTING INDUSTRIAL ARTS FACILITIES WITH
SELECTED INSTRUCTIONAL MATERIALS. THE CONCEPT
HAS FOUR PHASES, OF WHICH THIS ONE, THE
DEVELOPMENT AND STRUCTURE OF INDUSTRY, IS THE
FIRST. OTHER PHASES COVER BASIC ELEMENTS AND
PROCESSES OF INDUSTRY, MODERN INDUSTRIES, AND
VOCATIONAL AND OCCUPATIONAL GUIDANCE. FOR
EACH PHASE, FOUR INSTRUCTIONAL AIDS WERE
DEVELOPED THROUGH RESEARCH AND TRIAL TESTING
IN HIGH SCHOOLS, AND ARE STILL SUBJECT TO
EVALUATION AND REVISION. THIS STUDY GUIDE,
ONE OF THE FOUR AIDS FOR THIS PHASE, INCLUDES
STUDIES OF THE HISTORY AND DEVELOPMENT OF
HISTORY, FOUR GENERAL TYPES OF INDUSTRIES
WHICH MAKE UP THE INDUSTRIAL COMPLEX AND SIX
BASIC ACTIVITIES TYPICAL OF MOST INDUSTRIES.
OTHER DOCUMENTS IN THIS SERIES ARE AVAILABLE
AS VT 010 313, VT 010 290, AND VT 010 315
(ALSO IN THIS ISSUE). (GR)

VT 010 315 ED 037 557
DEVELOPMENT AND STRUCTURE OF INDUSTRY:
INSTRUCTIONAL AIDS LIST AND BIBLIOGRAPHY.

WISCONSIN STATE UNIV., PLATTEVILLE. COLL. OF
INDUSTRY
INDUSTRIOLOGY PROJECT, DEPARTMENT OF
INDUSTRIAL EDUCATION, COLLEGE OF INDUSTRY,
WISCONSIN STATE UNIVERSITY, PLATTEVILLE,
WISCONSIN 53818 (SET OF FOUR, \$6.50).
PUB DATE - ND 53P.

DESCRIPTORS - *INSTRUCTIONAL AIDS;
*BIBLIOGRAPHIES; INSTRUCTIONAL MATERIALS;
*INDUSTRIAL ARTS; *SECONDARY EDUCATION;
CLASSROOM MATERIALS; REFERENCE MATERIALS;
*RESOURCE MATERIALS; VIDEO TAPE RECORDINGS;
FILMSTRIPS; INSTRUCTIONAL FILMS
IDENTIFIERS - *INDUSTRIOLOGY PROJECT

ABSTRACT - THIS BOOKLET IS THE LAST IN A
SERIES OF FOUR INSTRUCTIONAL AIDS DESIGNED TO
IMPLEMENT THE FIRST PHASE OF THE
INDUSTRIOLOGY CONCEPT. THIS LISTING, INTENDED
TO SERVE AS A NUCLEUS OF RESOURCE MATERIALS,
HAS BEEN GROUPED INTO THE FOLLOWING FOUR
SECTIONS: (1) INDEX TO NUMBERED INSTRUCTIONAL
MEDIA SOURCES, (2) TITLES OF INFORMATION,
JOB, AND ACTIVITY PLAN SHEETS, (3)
INSTRUCTIONAL MEDIA OTHER THAN BOOKS, AND (4)
BIBLIOGRAPHY. OTHER DOCUMENTS IN THIS SERIES
ARE AVAILABLE AS VT 010 290, VT 010 313, AND
VT 010 314 (ALSO IN THIS ISSUE). (GR)

VT 010 439
JUNIOR HIGH SCHOOL CURRICULUM GUIDE FOR
INDUSTRIAL ARTS.

ALBERTA DEPT. OF EDUCATION, EDMONTON
PUB DATE - SEP69 97P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; JUNIOR HIGH SCHOOLS; INDUSTRIAL ARTS
TEACHERS; EDUCATIONAL OBJECTIVES; FOREIGN
COUNTRIES

IDENTIFIERS - *ALBERTA; CANADA

ABSTRACT - THIS CURRICULUM GUIDE IS FOR USE BY INDUSTRIAL ARTS TEACHERS OF JUNIOR HIGH SCHOOL PROGRAMS. IT WAS DEVELOPED BY A COMMITTEE OF TEACHERS, SUPERVISORS, AND TEACHER EDUCATORS FOR THE PROVINCE OF ALBERTA, CANADA. MAJOR TOPICS ARE: (1) CONTEMPORARY THOUGHT IN INDUSTRIAL ARTS EDUCATION, (2) FUNCTIONS OF THE JUNIOR HIGH SCHOOL, (3) OBJECTIVES OF THE INDUSTRIAL ARTS PROGRAMS, (4) DEFINITIONS OF TERMS, (5) THE MULTIPLE-ACTIVITY PROGRAM AND ORGANIZATION, (6) HOW TO USE THE GUIDE, (7) SAFETY EDUCATION, (8) GENERAL INFORMATION, AND (9) COURSE CONTENT OUTLINES FOR POWER, MATERIALS, ELECTRICITY, ELECTRONICS-COMPUTER, VISUAL COMMUNICATIONS, GRAPHIC COMMUNICATIONS, INDUSTRIAL CRAFTS, AND DEVELOPMENT AND RESEARCH. THE GUIDE ALSO CONTAINS METHODS OF DEVELOPING CONCEPTS, SUGGESTIONS FOR THE USE OF TEACHING AIDS AND ADDITIONAL REFERENCE BOOKS. THIS CURRICULUM GUIDE IS A REVISION OF VT 007 934 (AIM FALL 1969). (GR)

VT 010 505

MODERN METALWORKING TECHNOLOGY; EPDA INSTITUTE MANUAL.

OFFICE OF EDUCATION (OHEW), WASHINGTON, D.C.
PUB DATE - 69 248P. MATERIALS DEVELOPED AT EPDA INST. (WESTERN MICHIGAN UNIV., KALAMAZOO, SUMMER 1969).

DESCRIPTORS - *INDUSTRIAL ARTS; FINISHING; METAL INDUSTRY; METALS; WELDING; *METALLURGY; *METAL WORKING OCCUPATIONS; TRADE AND INDUSTRIAL EDUCATION; INSTRUCTIONAL AIDS; *TEACHER DEVELOPED MATERIALS; *SUMMER INSTITUTES; SCRIPTS
IDENTIFIERS - EDUCATION PROFESSIONS
DEVELOPMENT ACT; EPDA

ABSTRACT - DEVELOPED BY PARTICIPANTS OF AN EDUCATION PROFESSIONAL DEVELOPMENT ACT (EPOA) INSTITUTE, THIS MANUAL IS FOR TEACHER USE IN CONJUNCTION WITH A SLIDE PRESENTATION IN METALWORKING TECHNOLOGY. UNITS INCLUDE: (1) GAS METAL ARC (MIG), (2) GAS TUNGSTEN ARC (TIG), (3) PLASMA ARC, (4) ELECTRON BEAM WELDING, (5) ELECTRICAL DISCHARGE MACHINING, (6) ELECTRO CHEMICAL GRINDING, (7) ELECTRO CHEMICAL MACHINING, (8) POWDERED METALLURGY, (9) FREE ABRASIVE MACHINING, (10) URETHANE FORMING, AND (11) METAL FINISHING. EACH UNIT CONTAINS A TITLE SLIDE, INTRODUCTION, EQUIPMENT, PROCESSES, ADVANTAGES, AND DISADVANTAGES. A BIBLIOGRAPHY, REVIEW QUESTIONS, AND A GLOSSARY ARE INCLUDED WITH EACH SECTION. (GR)

VT 010 605

METALWORK 1-2.

MILWAUKEE PUBLIC SCHOOLS, WIS. DIV. OF CURRICULUM AND INSTRUCTION.

MILWAUKEE BOARD OF DIRECTORS, CURRICULUM LIBRARY, 5225 WEST VLIET STREET, P.O. DRAWER 10 K, MILWAUKEE, WISCONSIN 53201 (\$6.00).
PUB DATE - 64 73P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL

ARTS; *METALS; GRADE 7; MALES; COURSE OBJECTIVES; COURSE CONTENT; COURSE DESCRIPTIONS; DIAGNOSTIC TESTS; BIBLIOGRAPHIES; INSTRUCTIONAL AIDS

ABSTRACT - DEVELOPED BY A CURRICULUM COMMITTEE OF INDUSTRIAL ARTS TEACHERS, THIS CURRICULUM GUIDE IS FOR TEACHER USE IN PLANNING A 2-SEMESTER INDUSTRIAL ARTS COURSE FOR JUNIOR HIGH SCHOOL BOYS STUDYING METALWORKING. CONTENTS INCLUDE: (1) INDUSTRIAL ARTS PROGRAM OBJECTIVES, (2) COURSE DESCRIPTION, (3) COURSE OUTLINE, (4) JOB OPPORTUNITIES, AND (5) DESCRIPTION OF APPRENTICESHIP PROGRAM IN WISCONSIN. THE INSTRUCTOR WILL FIND BASIC SKILLS, AND UNDERSTANDINGS, AND SUGGESTED INSTRUCTIONAL AIDS AND PROJECTS LISTED IN THE COURSE OUTLINE. APPENDED ARE: A DIAGNOSTIC TEST, TYPICAL JOB-PLANNING SHEET, INSTRUCTION SHEET, INSTRUCTION CHART, SUGGESTED SAFETY TESTS FOR EACH MACHINE, SAFE PRACTICE FORM, TEST ON RELATED MATHEMATICS, SEVERAL UNIT TESTS, VOCABULARY LIST, BIBLIOGRAPHY OF REFERENCE TEXTS, AND AN ANNOTATED LISTING OF INSTRUCTIONAL AIDS WITH THEIR RESPECTIVE SOURCES. (GR)

VT 010 613

HULEY, MILAN; JACOBSON, JOHN
FUNDAMENTALS OF ELECTRICITY AND ELECTRONICS. INDUSTRIAL ARTS GUIDE.

MILWAUKEE PUBLIC SCHOOLS, WIS. DIV. OF CURRICULUM AND INSTRUCTION.
PUB DATE - 65 98P.

DESCRIPTORS - *CURRICULUM GUIDES; *ELECTRICITY; *ELECTRONICS; *INDUSTRIAL ARTS; GRADE 8; COURSE OBJECTIVES; COURSE DESCRIPTIONS; COURSE CONTENT; LABORATORY EXPERIMENTS; BIBLIOGRAPHIES; FILMS; FILMSTRIPS; INSTRUCTIONAL AIDS

ABSTRACT - INCORPORATING SUGGESTIONS FROM INDUSTRIAL ARTS TEACHERS, THIS CURRICULUM GUIDE IS FOR TEACHER USE IN SELECTING, ORGANIZING, AND PRESENTING THE CONTENT OF A 2-SEMESTER INDUSTRIAL ARTS COURSE AT THE EIGHTH-GRADE LEVEL IN ELECTRICITY AND ELECTRONICS. THE GUIDE INCLUDES: (1) COURSE OBJECTIVES, (2) SAFETY RULES FOR SHOP, (3) COURSE DESCRIPTION, (4) COURSE OUTLINE, (5) 62 JOB ASSIGNMENTS, (6) SUGGESTED JOB SHEETS, (7) LISTING OF FILMS AND FILMSTRIPS, (8) BIBLIOGRAPHY, AND (9) LISTING OF FREE AND INEXPENSIVE INSTRUCTIONAL AIDS. ASSIGNMENT SHEETS GIVE OBJECTIVE, REFERENCES, RELEVANT INFORMATION, PROCEDURE, PROBLEMS, AND NECESSARY TOOLS AND MATERIALS. (GR)

VT 010 644

FIRE CHEMISTRY.

CALIFORNIA STATE DEPT. OF EDUCATION, SACRAMENTO. BUREAU OF INDUSTRIAL EDUCATION. CALIFORNIA STATE DEPARTMENT OF EDUCATION, BUREAU OF INDUSTRIAL EDUCATION, FIRE SERVICE TRAINING PROGRAM, 721 CAPITOL MALL, ROOM 414, SACRAMENTO, CALIFORNIA 95814 (\$3.25).
PUB DATE - 67 22P.

DESCRIPTORS - *INDUSTRIAL EDUCATION; *FIRE

IND ARTS

SCIENCE EDUCATION; SAFETY EDUCATION;
*CHEMICAL REACTIONS; *VOCABULARY
IDENTIFIERS - *FIRE CHEMISTRY

ABSTRACT - THIS DOCUMENT ON FIRE CHEMISTRY CONTAINS THE TERMINOLOGY AND DEFINITIONS OF 15 TERMS USED TO DESCRIBE FIRE AND THE CHEMISTRY INVOLVED IN FIRE. SEVERAL BASIC EXPERIMENTS ARE DESCRIBED TO EXPLAIN THE PHENOMENA OF EXPANSION AND CONTRACTION, TRANSMISSION OF HEAT, AND DUST EXPLOSIONS. THE DOCUMENT IS ILLUSTRATED WITH LINE DRAWINGS. (GR)

VT 010 737

DEMONSTRATION AIDS FOR AVIATION EDUCATION.

CIVIL AIR PATROL, WASHINGTON, D.C. CURRICULUM LAB.

PUB DATE - 68 36P.

DESCRIPTORS - *AVIATION TECHNOLOGY;
*AEROSPACE TECHNOLOGY; *DEMONSTRATIONS
(EDUCATIONAL); *NATURAL SCIENCES;
*INSTRUCTIONAL MATERIALS; INDUSTRIAL ARTS;
TEACHER DEVELOPED MATERIALS; SUMMER WORKSHOPS
IDENTIFIERS - *AIR AGE; AVIATION EDUCATION

ABSTRACT - DEVELOPED BY TEACHERS IN AN AVIATION EDUCATION WORKSHOP AT MIAMI UNIVERSITY, THIS PUBLICATION CONTAINS 105 DEMONSTRATIONS ILLUSTRATING PRINCIPLES OF AVIATION WITHIN A CLASSROOM SETTING. THE DEMONSTRATIONS ARE GROUPED INTO THE FOLLOWING UNITS: (1) PROPERTIES OF AIR, (2) WHAT MAKES AN AIRPLANE FLY, AND (3) WEATHER IS IMPORTANT TO AVIATION. EACH DEMONSTRATION CONTAINS A LIST OF NECESSARY EQUIPMENT AND STEP-BY-STEP PROCEDURES. THE DEMONSTRATIONS CAN BE USED FOR TEACHING NATURAL SCIENCE AS WELL AS AVIATION EDUCATION TO BOTH OLDER AND ELEMENTARY SCHOOL STUDENTS. (GR)

VT 011 074

INDUSTRIAL ARTS SAFETY CHECKLIST.

WASHINGTON STATE DEPT. OF PUBLIC INSTRUCTION,
OLYMPIA. OFFICE OF THE STATE SUPERINTENDENT.
PUB DATE - 69 16P.

DESCRIPTORS - *INDUSTRIAL ARTS; LABORATORY
SAFETY; *SAFETY; *INSPECTION; *FIELD CHECK;
EDUCATIONAL SPECIFICATIONS; *STATE PROGRAMS
IDENTIFIERS - *WASHINGTON STATE

ABSTRACT - PREPARED BY STATE PERSONNEL AND FIELD-TESTED IN THE PUBLIC SCHOOLS, THIS SAFETY INSPECTION CHECKLIST FOR INDUSTRIAL EDUCATION WILL SERVE TO: (1) INFORM, EDUCATE, AND REMIND PEOPLE OF WHAT TO LOOK AT, (2) TRAIN PERSONNEL TO BE OBSERVANT AND AWARE OF THEIR ENVIRONMENT, (3) PROVIDE A SOURCE OF FEED-BACK INFORMATION TO TEACHERS AND ADMINISTRATORS, AND (4) PROVIDE A RECORD OF SAFETY ITEMS AND SAFETY ACTIVITIES. AREAS GIVEN CONSIDERATION FOR INSPECTION ARE: ADMINISTRATION, PERSONNEL, ACTIVITIES, INSTRUCTION, ELECTRICAL SAFEGUARDS, EQUIPMENT, HOT METALS, GAS, WELDING, FACILITIES, STORAGE, AND FIRE PRECAUTIONS. (GR)

47

VT 011 086

MEEHAN, MICHAEL
INDUSTRIAL ARTS.

WYDOWN JUNIOR HIGH, CLAYTON, MO.
PUB DATE - AUG67 79P.

DESCRIPTORS - *INDUSTRIAL ARTS; *CURRICULUM
GUIDES; *GRADE 7; *GRADE 8; *COURSE CONTENT;
JUNIOR HIGH SCHOOLS; COURSE OBJECTIVES;
COURSE DESCRIPTIONS; BIBLIOGRAPHIC CITATIONS;
AUDIOVISUAL AIDS

ABSTRACT - INTENDED FOR INDUSTRIAL ARTS STUDENTS IN GRADES 7 AND 8, THIS CURRICULUM GUIDE WAS INDIVIDUALLY AUTHORED AND COVERS BROAD GENERAL AND PRACTICAL PHASES OF INDUSTRIAL ACTIVITIES. THE ACTIVITIES ARE ORGANIZED TO FACILITATE THE PROGRESSIVE MOVEMENT OF INDIVIDUAL STUDENTS FROM ONE ACTIVITY TO ANOTHER. IN THE SEVENTH GRADE, THE PUPIL WILL BE INTRODUCED TO THE FUNDAMENTALS OF MECHANICAL DRAWING, WOODWORKING, METAL WORKING, LEATHERCRAFT, AND BASIC ELECTRICITY. THE EIGHTH GRADE PUPIL WILL DO ADVANCED WORK IN THE AREAS OF MECHANICAL DRAWING, BLUEPRINT READING, MACHINE WOODWORKING, AND METAL WORKING. IN ADDITION, PLASTICS, POWER MECHANICS, AND AN INTRODUCTION TO ELECTRONICS ARE COVERED IN THE EIGHTH GRADE. INCLUDED ARE REFERENCES, TEACHING PLANS, ASSIGNMENT SHEETS, AND AUDIOVISUAL AIDS AND MATERIALS. (GR)

VT 011 087

INDUSTRIAL ARTS CURRICULUM GUIDE.

SOUTH-WESTERN CITY SCHOOL DISTRICT, GROVE CITY, OHIO.

PUBLICATIONS OFFICE, SOUTH WESTERN CITY SCHOOLS, 3708 SOUTH BROADWAY, GROVE CITY, OHIO 43123 (\$1.50).

PUB DATE - ND 37P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL
ARTS; GRAPHIC ARTS; ELECTRONICS; WOODWORKING;
*SHOP CURRICULUM; GRADE 9; GRADE 10; GRADE
11; GRADE 12

ABSTRACT - PREPARED BY A COMMITTEE OF JUNIOR AND SENIOR HIGH SCHOOL TEACHERS, THIS GUIDE IS FOR USE BY ADMINISTRATORS, SUPERVISORS, AND TEACHERS IN PLANNING AND IMPLEMENTING INDUSTRIAL ARTS PROGRAMS FOR GRADES 9 THROUGH 12. FOLLOWING GENERAL INFORMATION ON OBJECTIVES, ADMINISTRATION, FACILITIES, AND TEACHING SUGGESTIONS, TOPICAL OUTLINES ARE GIVEN FOR: (1) INDUSTRIAL ARTS, INCLUDING EXPLORATORY DRAWING AND EXPLORATORY GRAPHICS (GRADE 9), (2) EXPLORATORY ELECTRICITY, EXPLORATORY ENGINES, EXPLORATORY WOODS, EXPLORATORY METALS, AND MECHANICAL DRAWING I (GRADE 10), (3) INDUSTRIAL ARTS I AND MECHANICAL DRAWING II (GRADE 11), AND (4) INDUSTRIAL ARTS II AND ENGINEERING DRAWING (GRADE 12). OUTLINES CONTAIN OBJECTIVES, CONTENT, TIME ALLOTMENT, AND BASIC TEXT, AND IN SOME CASES, SUGGESTED LEARNING ACTIVITIES AND PROJECTS. (AW)

VT 011 295

CURRICULUM GUIDE IN METALS, GRADES SEVEN THROUGH TWELVE. SECONDARY CURRICULUM BULLETIN

NO. 177.

KANSAS CITY PUBLIC SCHOOLS, MO. INDUSTRIAL ARTS DEPT.
BUSINESS SERVICES DIVISION, 601 BOARD OF EDUCATION BUILDING, 1211 MCGEE STREET, KANSAS CITY, MISSOURI 64106 (\$2.50).
PUB DATE - 69 213P.

DESCRIPTORS - *CURRICULUM GUIDES; *METAL WORKING OCCUPATIONS; *SHEET METAL WORK; *METALS; *INDUSTRIAL ARTS; TEACHING GUIDES; SECONDARY GRADES; ELEMENTARY GRADES

ABSTRACT - PREPARED BY A CURRICULUM COMMITTEE, THIS GUIDE IS DESIGNED TO AID INDUSTRIAL ARTS TEACHERS IN PLANNING AND CONDUCTING METALS COURSES FOR GRADES 7-12. TEACHING SUGGESTIONS AND GENERAL INFORMATION ON THE FORMAT OF THE GUIDE ARE FOLLOWED BY FOUR SUGGESTED CURRICULUM OUTLINES, WITH THE FIRST COMBINING GRADES 7 AND 8 (SEVEN UNITS), THE SECOND COVERING GRADE 9 (SEVEN UNITS), THE THIRD FOR GRADE 10 (SIX UNITS), AND THE FOURTH COMBINING GRADES 11 AND 12 (SIX UNITS). UNITS PROVIDE OVERVIEW, SPECIFIC OBJECTIVES, VOCABULARY, CONCEPTS AND GENERALIZATIONS TO BE ACQUIRED, STUDENT ACTIVITIES AND INVESTIGATIONS, EVALUATION SUGGESTIONS, AND RESOURCE MATERIALS. A STYLE SHEET FOR WRITTEN WORK IS APPENDED. (AW)

VT 011 334

BEGINNING DRAFTING. A HANDBOOK FOR GRADES SEVEN AND EIGHT.

KANSAS CITY PUBLIC SCHOOLS, MO. INDUSTRIAL ARTS DEPT.
BUSINESS SERVICES DIVISION, 601 BOARD OF EDUCATION BUILDING, 1211 MCGEE STREET, KANSAS CITY, MISSOURI 64106 (\$1.00).
PUB DATE - NOV58 83P.

DESCRIPTORS - *WORKBOOKS; *INDUSTRIAL ARTS; *DRAFTING; *STUDY GUIDES; ORTHOGONAL PROJECTION; ENGINEERING DRAWING; TEACHING GUIDES; GRADE 7; GRADE 8; TRADE AND INDUSTRIAL EDUCATION; SECONDARY GRADES

ABSTRACT - DEVELOPED BY A CURRICULUM COMMITTEE FOR THE KANSAS CITY MISSOURI PUBLIC SCHOOLS, THIS WORKBOOK IS FOR TEACHER AND STUDENT USE IN INDUSTRIAL ARTS DRAFTING COURSES IN GRADES 7 AND 8. UNITS ARE: (1) FREEHAND SKETCHING, (2) CHARTS, MAPS, AND GRAPHS, (3) ELECTRICAL DRAFTING, AND (4) FREEHAND WORKING, INSTRUMENT WORKING, PICTORIAL, ARCHITECTURAL, MACHINE, AND SHEET METAL DRAWINGS. EACH UNIT CONTAINS RELATED GENERAL INFORMATION AND ASSIGNMENTS. WORKSHEETS FOR USE WITH THIS DOCUMENT ARE AVAILABLE FROM THE SOURCE OF AVAILABILITY LISTED ABOVE. (GER)

VT 011 363

INDUSTRIAL ARTS CURRICULUM GUIDE FOR THE STATE OF WYOMING GRADES K-12.

WYOMING RESEARCH COORDINATING UNIT IN VOCATIONAL-TECHNICAL EDUCATION, CHEYENNE.
PUB DATE - AUG69 82P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL

IND ARTS

ARTS; *PROGRAM DESCRIPTIONS; INDUSTRIAL ARTS TEACHERS; *STATE CURRICULUM GUIDES; SECONDARY GRADES; *COURSE DESCRIPTIONS; PREVOCATIONAL EDUCATION; ELEMENTARY GRADES; CURRICULUM PLANNING

ABSTRACT - PREPARED BY MEMBERS OF THE WYOMING STATE INDUSTRIAL ARTS CURRICULUM COMMITTEE, THIS GUIDE IS INTENDED TO AID WYOMING INDUSTRIAL ARTS TEACHERS IN PLANNING AND CONDUCTING IMPROVED PROGRAMS ON BOTH THE ELEMENTARY AND SECONDARY LEVELS. FOLLOWING BRIEF INFORMATION ON THE PHILOSOPHY OF THE PROGRAM, GOALS, ORGANIZATIONAL PLANS, SAFETY, PERSONNEL AND SHOP MANAGEMENT, AND POLICY REGARDING SPECIAL STUDENTS, NINE CONTENT AREAS ARE OUTLINED, INCLUDING: (1) DRAFTING, (2) WOODWORKING, (3) METALWORKING, (4) PLASTICS, (5) BASIC ELECTRICITY, (6) POWER MECHANICS AND TRANSPORTATION, (7) HOME MAINTENANCE, (8) GRAPHIC ARTS, AND (9) CRAFTS, SUCH AS CERAMICS, LEATHERCRAFT, AND ART METALS. PROGRAM EVALUATION GUIDELINES AND AN APPENDIX CONTAINING EYE SAFETY LEGISLATION, SAFETY COLOR CODING, AND A CONTENT AREA BIBLIOGRAPHY ARE ALSO INCLUDED. (AW)

VT 011 399 ED 040 303

INDIVIDUALIZED MATERIAL FOR INDUSTRIAL EDUCATION BASED ON THE AVA BOOKLET "A GUIDE TO IMPROVING INSTRUCTION IN INDUSTRIAL ARTS".

WAYNE STATE UNIV., DETROIT, MICH.
PUB DATE - ND 1,041P.

DESCRIPTORS - *INDUSTRIAL ARTS; *INDIVIDUALIZED PROGRAMS; INDIVIDUALIZED INSTRUCTION; *CURRICULUM DEVELOPMENT; *INSTRUCTIONAL MATERIALS; *TEACHER DEVELOPED MATERIALS; INDUSTRY; SIMULATION; INDIVIDUALIZED CURRICULUM IDENTIFIERS - *EXPERIENCED TEACHER FELLOWSHIP PROGRAM; EXTEP; AMERICAN VOCATIONAL ASSOCIATION; AVA

ABSTRACT - THIS PACKAGE OF INDIVIDUALIZED CURRICULUM MATERIALS FOR INDUSTRIAL ARTS, DEVELOPED BY THE 1969-70 EXPERIENCED TEACHER FELLOWSHIP PROGRAM FOR TEACHER AND STUDENT USE, IS A RESULT OF AN IN-DEPTH STUDY OF THE 1968 REVISION OF THE AMERICAN VOCATIONAL ASSOCIATION'S BOOKLET, "A GUIDE TO IMPROVING INSTRUCTION IN INDUSTRIAL ARTS." THE 10 MAJOR UNITS INCLUDED ARE: (1) INDUSTRY AND CIVILIZATION, (2) THE INDUSTRY, (3) ORGANIZATION AND MANAGEMENT, (4) RESEARCH AND DEVELOPMENT, (5) PLANNING FOR PRODUCTION AND MANUFACTURING, (6) PRODUCTION AND MANUFACTURING, (7) DISTRIBUTION, (8) SERVICE, (9) HAND TOOLS AND SIMPLE MACHINES, AND (10) SOPHISTICATED MACHINES. EACH UNIT, IDENTIFIED BY A PREFIX LETTER, CONTAINS COLOR CODED INDIVIDUALIZED PACKAGES OF INFORMATION FOR STUDENT USE, TEACHER USE, AND TEACHER REFERENCE INFORMATION, WHICH OUTLINES SPECIAL PREPARATIONS OR MATERIALS REQUIRED FOR STUDENT OR TEACHER PACKAGES. EACH PACKAGE WITHIN THE UNIT IS DESIGNED TO BE FLEXIBLE FOR USE IN GRADE 7 THROUGH GRADE 12 AND WITH SLIGHT MODIFICATION IT CAN BE USED FOR LOWER OR HIGHER GRADES. SEVERAL TEACHER-DESIGNED SIMULATION GAMES ABOUT INDUSTRY ARE INCLUDED. A RELATED DOCUMENT IS AVAILABLE AS ED 024 814

IND ARTS

49

OR VT 007 380 (ARM SPRING 1970). (GR)

VT 011 485

DIERS, ANDREW V.
LETTERING, LAP--UNIT 1. ENGINEERING 20, BASIC
DRAFTING.

HUGHSON UNION HIGH SCHOOL, CALIF.
PUB DATE - ND 10P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING
ACTIVITIES; *DRAFTING; *ENGINEERING GRAPHICS;
ENGINEERING DRAWING; INSTRUCTIONAL MATERIALS;
SIGNS; PRINTING; INDIVIDUAL STUDY
IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION
ACT TITLE III; ESEA TITLE III; LEARNING
ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED UNDER A GRANT FROM THE
ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA)
TITLE III, THIS LEARNING ACTIVITY PRESENTS AN
INTRODUCTION TO FREEHAND LETTERING FOR BASIC
DRAFTING. DESIGNED AS A SELF-INSTRUCTIONAL
UNIT FOR INDIVIDUAL LEARNING, TOPICS ARE: (1)
HOW TO USE THIS LEARNING ACTIVITY PACKAGE,
(2) FLOW CHART, (3) GRADING PROCEDURE, (4)
PRIMARY IDEA, (5) SECONDARY IDEA, (6)
RATIONALE, (7) PRE-TEST, (8) STUDENT
OBJECTIVE, (9) REQUIRED ACTIVITIES, (10)
OPTIONAL ACTIVITIES, AND (11) TEACHER
EVALUATION TEST. THIS DOCUMENT IS ONE IN A
SERIES OF RELATED DOCUMENTS AVAILABLE AS VT
011 485-VT 011 494, ALL IN THIS ISSUE.
ADDITIONAL LEARNING ACTIVITY PACKAGES (LAP)
ARE AVAILABLE. (GB)

VT 011 486

DIERS, ANDREW V.
INSTRUMENT TECHNIQUE, LAP--UNIT II.
ENGINEERING 20, BASIC DRAFTING.

HUGHSON UNION HIGH SCHOOL, CALIF.
PUB DATE - ND 7P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING
ACTIVITIES; *DRAFTING; *ENGINEERING GRAPHICS;
ENGINEERING DRAWING; INSTRUCTIONAL MATERIALS;
INDIVIDUAL STUDY
IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION
ACT TITLE III; ESEA TITLE III; LEARNING
ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED UNDER A GRANT FROM THE
ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA)
TITLE III, THIS LEARNING ACTIVITY ON
INSTRUMENT TECHNIQUES OF BASIC DRAWING FOR
DRAFTING IS DESIGNED AS A SELF INSTRUCTIONAL
UNIT FOR INDIVIDUAL LEARNING. CONTENTS ARE:
(1) INSTRUMENT TECHNIQUES, (2) DRAWING
UNIFORM LINES AT VARIOUS ANGLES, (3) DRAWING
"THE ALPHABET OF LINES," (4) USING THE
ARCHITECT'S SCALE, AND (5) DRAWING CIRCLES
AND ARCS UNIFORMLY WITH THE USE OF A COMPASS.
THIS DOCUMENT IS ONE IN A SERIES OF RELATED
DOCUMENTS AVAILABLE AS VT 011 485-VT 011 494,
ALL IN THIS ISSUE. ADDITIONAL LEARNING
ACTIVITY PACKAGES (LAP) ARE AVAILABLE. (GB)

VT 011 487

HAMES, DAN
THE ABC'S OF VIEWS OF OBJECTS. MINI LAP--UNIT
3. BASIC DRAFTING SURVEY CLASS.

HUGHSON UNION HIGH SCHOOL, CALIF.
PUB DATE - 67 40P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING
ACTIVITIES; *DRAFTING; *ORTHOGONAL
PROJECTION; ENGINEERING GRAPHICS; ENGINEERING
DRAWING; INSTRUCTIONAL MATERIALS;
BIBLIOGRAPHIC CITATIONS; INDIVIDUAL STUDY
IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION
ACT TITLE III; ESEA TITLE III; LEARNING -
ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED UNDER A GRANT FROM THE
ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA)
TITLE III, THIS LEARNING ACTIVITY PRESENTS A
DESCRIPTION OF THE SHAPE AND SIZE OF OBJECTS
THROUGH THE LANGUAGE OF DRAWING. DESIGNED AS
A SELF-INSTRUCTIONAL UNIT FOR INDIVIDUAL
LEARNING, THE TOPICS ARE ORTHOGRAPHIC
PROJECTION AND PICTORIAL DRAWINGS WHICH
INCLUDE ISOMETRIC, OBLIQUE, AND PERSPECTIVE.
THIS DOCUMENT IS ONE IN A SERIES OF RELATED
DOCUMENTS AVAILABLE AS VT 011 485-VT 011 494,
ALL IN THIS ISSUE. ADDITIONAL LEARNING
ACTIVITY PACKAGES (LAP) ARE AVAILABLE. (GB)

VT 011 488

DIERS, ANDREW V.
MULTI-VIEW DRAWINGS, LAP--UNIT IV.
ENGINEERING 20, BASIC DRAFTING.

MODESTO JUNIOR COLL., CALIF.
PUB DATE - ND 10P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING
ACTIVITIES; *DRAFTING; *ENGINEERING DRAWING;
ENGINEERING GRAPHICS; INSTRUCTIONAL
MATERIALS; INDIVIDUAL STUDY
IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION
ACT TITLE III; ESEA TITLE III; LEARNING
ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED UNDER A GRANT FROM THE
ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA)
TITLE III, THIS LEARNING ACTIVITY PRESENTS AN
INTRODUCTION TO MULTI-VIEW DRAWINGS FOR BASIC
DRAFTING. DESIGNED AS A SELF-INSTRUCTIONAL
UNIT FOR INDIVIDUAL LEARNING, CONTENT
INCLUDES SUGGESTIONS FOR RECOGNIZING AND
DRAWING VARIOUS VIEWS OF OBJECTIVES. THIS
DOCUMENT IS ONE IN A SERIES OF RELATED
DOCUMENTS AVAILABLE AS VT 011 485-VT 011 494,
ALL IN THIS ISSUE. ADDITIONAL LEARNING
ACTIVITY PACKAGES (LAP) ARE AVAILABLE. (GB)

VT 011 489

HAMES, DAN
INTRODUCTION TO APPLIED DRAWING. BASIC
DRAFTING SURVEY CLASS, UNIT 5.

HUGHSON UNION HIGH SCHOOL, CALIF.
PUB DATE - 68 56P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING
ACTIVITIES; *DRAFTING; *ENGINEERING DRAWING;
ENGINEERING GRAPHICS; INSTRUCTIONAL
MATERIALS; ILLUSTRATIONS; BIBLIOGRAPHIC
CITATIONS; INDIVIDUAL STUDY; DIAGRAMS
IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION
ACT TITLE III; ESEA TITLE III; LEARNING
ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED UNDER A GRANT FROM THE ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA) TITLE III, THIS LEARNING ACTIVITY PRESENTS AN INTRODUCTION TO APPLIED DRAWING FOR BASIC DRAFTING. DESIGNED AS A SELF INSTRUCTIONAL UNIT FOR INDIVIDUAL LEARNING, THESE TOPICS ARE PRESENTED: (1) USE AND CARE OF COMMON DRAFTING TOOLS AND MATERIALS, (2) THE STANDARD LAYOUT OF A SHEET, (3) FUNDAMENTAL OPERATIONS AND TECHNIQUES, (4) USE OF COMPASS AND TRIANGLES, (5) CONSTRUCTION OF MULTI-VIEW DRAWINGS, AND (6) USE OF LINE SYMBOLS AND LINE WEIGHTS. THIS DOCUMENT IS ONE IN A SERIES OF RELATED DOCUMENTS AVAILABLE AS VT 011 485-VT 011 494, ALL IN THIS ISSUE. ADDITIONAL LEARNING ACTIVITY PACKAGES (LAP) ARE AVAILABLE. (GB)

VT 011 490
DIERS, ANDREW V.
ADVANCED MULTI-VIEW DRAWINGS, LAP--UNIT VI.
ENGINEERING 20, BASIC DRAFTING.

HUGHSON UNION HIGH SCHOOL, CALIF.
PUB DATE - NO 7P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING ACTIVITIES; *DRAFTING; *ENGINEERING DRAWING; ENGINEERING GRAPHICS; INSTRUCTIONAL MATERIALS IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION ACT TITLE III; ESEA TITLE III; LEARNING ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED UNDER A GRANT FROM THE ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA) TITLE III, THIS LEARNING ACTIVITY PRESENTS ADVANCED MULTI-VIEW DRAWINGS FOR BASIC DRAFTING. THIS DOCUMENT IS ONE IN A SERIES OF RELATED DOCUMENTS AVAILABLE AS VT 011 485-VT 011 494, ALL IN THIS ISSUE. ADDITIONAL LEARNING ACTIVITY PACKAGES ARE AVAILABLE. (GB)

VT 011 491
DIERS, ANDREW V.
AUXILIARY VIEWS, LAP--UNIT VII. ENGINEERING 20, BASIC DRAFTING.

HUGHSON UNION HIGH SCHOOL, CALIF.
PUB DATE - NO 7P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING ACTIVITIES; *DRAFTING; *ENGINEERING GRAPHICS; ENGINEERING DRAWING; INSTRUCTIONAL MATERIALS IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION ACT TITLE III; ESEA TITLE III; LEARNING ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED UNDER A GRANT FROM THE ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA) TITLE III, THIS LEARNING ACTIVITY PRESENTS ACTIVITIES PERTAINING TO AUXILIARY VIEWS FOR BASIC DRAFTING. THIS DOCUMENT IS ONE IN A SERIES OF RELATED DOCUMENTS AVAILABLE AS VT 011 485-VT 011 494, ALL IN THIS ISSUE. ADDITIONAL LEARNING ACTIVITY PACKAGES (LAP) ARE AVAILABLE. (GB)

VT 011 492
DIERS, ANDREW V.
SECTIONAL VIEWS, LAP--UNIT VIII. ENGINEERING 20, BASIC DRAFTING.

HUGHSON UNION HIGH SCHOOL, CALIF.
PUB DATE - NO 14P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING ACTIVITIES; *DRAFTING; *ENGINEERING DRAWING; ENGINEERING GRAPHICS; INSTRUCTIONAL MATERIALS IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION ACT TITLE III; ESEA TITLE III; LEARNING ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED UNDER A GRANT FROM THE ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA) TITLE III, THIS LEARNING ACTIVITY PRESENTS USE AND TECHNIQUES OF SECTIONAL DRAWINGS IN BASIC DRAFTING. THIS DOCUMENT IS ONE IN A SERIES OF RELATED DOCUMENTS AVAILABLE AS VT 011 485-VT 011 494, ALL IN THIS ISSUE. ADDITIONAL LEARNING ACTIVITY PACKAGES ARE AVAILABLE. (GB)

VT 011 493
DIERS, ANDREW V.
DIMENSIONING LAP--UNIT IX. ENGINEERING 20, BASIC DRAFTING.

HUGHSON UNION HIGH SCHOOL, CALIF.
PUB DATE - NO 11P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING ACTIVITIES; *DRAFTING; *ENGINEERING GRAPHICS; ENGINEERING DRAWING; INSTRUCTIONAL MATERIALS IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION ACT TITLE III; ESEA TITLE III; LEARNING ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED UNDER A GRANT FROM THE ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA) TITLE III, THIS LEARNING ACTIVITY PACKAGE PRESENTS THE BASIC THEORY OF FRACTIONAL DIMENSIONING IN BASIC DRAFTING. THIS DOCUMENT IS ONE IN A SERIES OF RELATED DOCUMENTS AVAILABLE AS VT 011 485-VT 011 494, ALL IN THIS ISSUE. ADDITIONAL LEARNING ACTIVITY PACKAGES (LAP) ARE AVAILABLE. (GB)

VT 011 494
DIERS, ANDREW V.
WORKING DRAWINGS, LAP--UNIT X. ENGINEERING 20, BASIC DRAFTING.

HUGHSON UNION HIGH SCHOOL, CALIF.
PUB DATE - NO 7P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING ACTIVITIES; *DRAFTING; *ENGINEERING DRAWING; ENGINEERING GRAPHICS; INSTRUCTIONAL MATERIALS IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION ACT TITLE III; ESEA TITLE III; LEARNING ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED UNDER A GRANT FROM THE ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA) TITLE III, THIS LEARNING ACTIVITY PRESENTS IDEAS NEEDED TO MAKE A SET OF SIMPLE WORKING DRAWINGS IN BASIC DRAFTING. THIS DOCUMENT IS ONE IN A SERIES OF RELATED DOCUMENTS AVAILABLE AS VT 011 485-VT 011 494, ALL IN THIS ISSUE. ADDITIONAL LEARNING ACTIVITY PACKAGES (LAP) ARE AVAILABLE. (GB)

IND ARTS

51

VT 011 495

SHREVE, R.M.

SAFETY, YOUR CONCERN AND MINE. LEARNING
ACTIVITY PACKAGE, SAFETY IN THE WOOD SHOP.
LAP NO. 2.

PUB DATE - JUL68 20P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING
ACTIVITIES; HIGH SCHOOL STUDENTS; MANUALS;
AUTOINSTRUCTIONAL AIDS; INSTRUCTIONAL
MATERIALS; EDUCATIONAL OBJECTIVES;
*WOODWORKING; HAND TOOLS; *LABORATORY SAFETY;
SAFETY EDUCATION
IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION
ACT TITLE III; ESEA TITLE III; LEARNING
ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED WITH ELEMENTARY AND
SECONDARY EDUCATION ACT (ESEA) TITLE III
FUNDS, THIS LEARNING PACKAGE DESCRIBES SAFETY
RULES FOR THE HIGH SCHOOL INDUSTRIAL ARTS
WOOD SHOP. THE SELF-INSTRUCTIONAL UNIT
CONTAINS: (1) RATIONALE, (2) PRIMARY AND
SECONDARY IDEAS, (3) GENERAL INFORMATION, (4)
THREE INSTRUCTIONAL OBJECTIVES, AND (5)
INSTRUCTIONAL MATERIALS. THE INSTRUCTIONAL
OBJECTIVES COVER GENERAL SAFETY RULES, SAFETY
WITH HAND TOOLS, AND SAFETY WITH MACHINE
TOOLS. PICTURES OF WOODWORKING MACHINERY AND
MACHINE SAFETY INSTRUCTIONS ARE GIVEN. (GR)

VT 011 496

VAUGHN, CHARLES, AND OTHERS

COMPONENTS OF THE AUTOMOBILE. UNIT 2--LAP NO.
1.

HUGHSON UNION HIGH SCHOOL, CALIF.
PUB DATE - JUL68 15P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING
ACTIVITIES; HIGH SCHOOL STUDENTS; MANUALS;
*AUTOINSTRUCTIONAL AIDS; INSTRUCTIONAL
MATERIALS; EDUCATIONAL OBJECTIVES; AUTO
MECHANICS; *AUTO MECHANICS (OCCUPATION);
MOTOR VEHICLES; POWER MECHANICS
IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION
ACT TITLE III; ESEA TITLE III; LEARNING
ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED WITH ELEMENTARY AND
SECONDARY EDUCATION ACT (ESEA) TITLE III
FUNDS, THIS LEARNING ACTIVITY PACKAGE IS A
SELF-INSTRUCTIONAL UNIT ON VARIOUS COMPONENTS
OF THE AUTOMOBILE. THE UNIT CONTAINS: (1)
RATIONALE, (2) PRIMARY IDEA, (3) SECONDARY
IDEAS, (4) OBJECTIVES, (5) PRE-TEST, (6)
ACTIVITIES, (7) INSTRUCTIONAL SHEETS, (8)
ASSIGNMENT SHEET, AND (9) AUTO CHASSIS TEST.
A PRETEST ANSWER SHEET AND A BIBLIOGRAPHY ARE
GIVEN. (GR)

VT 011 497

WILLIAMS, EDGAR, AND OTHERS

SAFETY IN THE AUTO SHOP. UNIT NO. 1--LAP NO.
1.

HUGHSON UNION HIGH SCHOOL, CALIF.
PUB DATE - ND 18P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING
ACTIVITIES; HIGH SCHOOL STUDENTS; MANUALS;
*AUTOINSTRUCTIONAL AIDS; INSTRUCTIONAL

MATERIALS; EDUCATIONAL OBJECTIVES; *AUTO
MECHANICS; *LABORATORY SAFETY; SAFETY
EDUCATION
IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION
ACT TITLE III; ESEA TITLE III; LEARNING
ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED WITH ELEMENTARY AND
SECONDARY EDUCATION ACT (ESEA) TITLE III
FUNDS, THIS LEARNING ACTIVITY PACKAGE IS ON
SAFETY IN THE HIGH SCHOOL AUTO SHOP. DESIGNED
AS A SELF-INSTRUCTIONAL UNIT, IT CONTAINS:
(1) RATIONALE, (2) PRIMARY IDEA, (3)
SECONDARY IDEA, (4) OBJECTIVES, (5) PRETEST,
(6) ACTIVITIES, AND (7) EIGHT INSTRUCTIONAL
SHEETS. A PRETEST ANSWER SHEET AND
BIBLIOGRAPHY ARE INCLUDED. (GR)

VT 011 498

PETERSON, L.C.

GEOMETRY OF DRAWING, DRAFTING.--UNIVERSAL
LANGUAGE OF INDUSTRY. LAP NO. 6.

PUB DATE - JUL68 32P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING
ACTIVITIES; MANUALS; *AUTOINSTRUCTIONAL AIDS;
INSTRUCTIONAL MATERIALS; EDUCATIONAL
OBJECTIVES; *DRAFTING; GEOMETRIC CONCEPTS;
ENGINEERING DRAWING; *ORTHOGONAL PROJECTION;
HIGH SCHOOL STUDENTS
IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION
ACT TITLE III; ESEA TITLE III; LEARNING
ACTIVITY PACKAGE; LAP

ABSTRACT - DEVELOPED WITH ELEMENTARY AND
SECONDARY EDUCATION ACT (ESEA) TITLE III
FUNDS, THIS LEARNING ACTIVITY PACKAGE TEACHES
CERTAIN GEOMETRICAL CONSTRUCTIONS NEEDED IN
DRAFTING. DESIGNED AS A SELF-INSTRUCTIONAL
UNIT FOR HIGH SCHOOL STUDENTS, IT CONTAINS:
(1) RATIONALE, (2) GEOMETRIC APPLICATIONS,
(3) PRIMARY IDEAS, (4) STUDENT OBJECTIVES,
(5) PRETEST TERMS, (6) KEY TO PRETEST TERMS,
(7) PRETEST DRAWING, (8) REQUIRED AND
OPTIONAL ACTIVITIES, (9) INSTRUCTIONS
FOLLOWING COMPLETION OF ACTIVITIES, AND (10)
12 DRAWINGS. A BIBLIOGRAPHY IS INCLUDED. (GR)

VT 011 502

HAMES, DAN

DIMENSIONING RULES AND PRINCIPLES. LAP NO.
11.

HUGHSON UNION HIGH SCHOOL, CALIF.
PUB DATE - 68 12P.

DESCRIPTORS - *LEARNING ACTIVITIES;
*AUTOINSTRUCTIONAL AIDS; *DRAFTING;
*GUIDELINES; INDUSTRIAL ARTS; HIGH SCHOOL
STUDENTS; MANUALS; INSTRUCTIONAL AIDS
IDENTIFIERS - *ELEMENTARY AND SECONDARY
EDUCATION ACT TITLE III; ESEA TITLE III;
LEARNING ACTIVITY PACKAGE; LAP

ABSTRACT - THIS LEARNING ACTIVITY PACKAGE,
DEVELOPED UNDER A GRANT FROM ELEMENTARY
SECONDARY EDUCATION ACT (ESEA) TITLE III,
DESCRIBES DIMENSIONING RULES AND PRINCIPLES
OF DRAFTING. DESIGNED AS A SELF-INSTRUCTIONAL
UNIT FOR INDIVIDUAL LEARNING, IT CONTAINS:
(1) RATIONALE, (2) PRIMARY IDEAS, (3)
SECONDARY IDEAS, (4) PRETEST INSTRUCTIONS,

AND (5) FIVE SECONDARY IDEAS. EACH SECONDARY IDFA INCLUDES THE STATED OBJECTIVE AND ACTIVITIES. A BIBLIOGRAPHY IS GIVEN. ADDITIONAL LEARNING ACTIVITY PACKAGES (LAP) ARE AVAILABLE. (GR)

VT 011 507

COOPER, CLARE

PICTORIAL DRAWINGS. DRAFTING--LANGUAGE OF INDUSTRY. LAP NO. 8, BASIC DRAFTING.

HUGHSON UNION HIGH SCHOOL, CALIF.

PUB DATE - JUL68 13P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING ACTIVITIES; *ENGINEERING DRAWING; *DRAFTING; ENGINEERING GRAPHICS; INSTRUCTIONAL MATERIALS; AUTOINSTRUCTIONAL AIDS
IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION ACT TITLE III; ESEA TITLE III; LEARNING ACTIVITY PACKAGES; LAPS

ABSTRACT - DEVELOPED UNDER A GRANT FROM THE ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA) TITLE III, THIS LEARNING ACTIVITY PRESENTS PICTORIAL DRAWING IN BASIC DRAFTING. DESIGNED AS A SELF-INSTRUCTIONAL UNIT, THE CONTENT COVERS ISOMETRIC, OBLIQUE, AND PERSPECTIVE DRAWING METHODS. ADDITIONAL LEARNING ACTIVITY PACKAGES (LAP) ARE AVAILABLE IN THIS ISSUE. (GB)

VT 011 549

SHREVE, R.M.

IDENTIFICATION, CARE, AND USES OF HAND TOOLS.

SUMMERVILLE UNION HIGH SCHOOL, CALIF. WOOD SHOP DEPT.

PUB DATE - JUL68 23P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING ACTIVITIES; *WOODWORKING; *HAND TOOLS; ILLUSTRATIONS
IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION ACT TITLE III; ESEA TITLE III; LEARNING ACTIVITY PACKAGES; LAPS

ABSTRACT - DEVELOPED UNDER A GRANT FROM THE ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA) TITLE III, THIS LEARNING ACTIVITY PACKAGE PRESENTS MATERIAL ON IDENTIFICATION, CARE, AND USES OF HAND TOOLS. ILLUSTRATIONS ARE PRESENTED WITH TIPS ON USES AND CARE. ADDITIONAL LEARNING ACTIVITY PACKAGES ARE AVAILABLE IN THIS ISSUE. (GB)

VT 011 550

SEGAL, ALBERT J.

FIND YOUR WAY. LEARNING ACTIVITY PACKAGE, "PRE-LAP".

HUGHSON UNION HIGH SCHOOL, CALIF.

PUB DATE - 68 46P.

DESCRIPTORS - *INDUSTRIAL ARTS; *LEARNING ACTIVITIES; *SCHOOL SHOPS; *SAFETY; ILLUSTRATIONS; INSTRUCTIONAL MATERIALS
IDENTIFIERS - *ELEMENTARY SECONDARY EDUCATION ACT TITLE III; ESEA TITLE III; LEARNING ACTIVITY PACKAGES; LAPS

ABSTRACT - DEVELOPED UNDER A GRANT FROM THE

ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA) TITLE III, THIS LEARNING ACTIVITY IS INTENDED TO HELP THE NEW STUDENT BECOME FAMILIAR WITH THE PLACEMENT, PURPOSE, USES, AND SAFETY RULES OF POWER EQUIPMENT IN THE SHOP. INCLUDED ARE: (1) INSTRUCTIONAL OBJECTIVES, (2) ACTIVITY DIRECTIONS, (3) GENERAL SAFETY RULES, (4) DESCRIPTION OF CLEAN-UP JOBS, AND (5) NAMES AND USES OF EQUIPMENT. ADDITIONAL LEARNING ACTIVITY PACKAGES (LAP) ARE AVAILABLE IN THIS ISSUE. (GB)

VT 011 748

FUNCTIONS OF INDUSTRY.

GEORGIA SOUTHERN COLL., STATESBORO.

PUB DATE - NO 212P. RESULT OF THE EPDA INST. IN INDUSTRIAL AND CAREER DEVELOPMENT (GEORGIA SOUTHERN COLL., STATESBORO).

DESCRIPTORS - *INDUSTRIAL ARTS; *TEACHING GUIDES; *COURSE CONTENT; *INDUSTRY; *FILMS; FILMSTRIPS; INDUSTRIAL AIDS; COURSE OBJECTIVES; SECONDARY GRADES
IDENTIFIERS - *EDUCATION PROFESSIONS DEVELOPMENT ACT; EPDA

ABSTRACT - INTENDED FOR TEACHERS OF INDUSTRIAL ARTS IN TEACHING THE FUNCTIONS OF INDUSTRY, THIS COURSE OF STUDY WAS COMPILED AS A RESULT OF THE EPDA INSTITUTE IN INDUSTRIAL AND CAREER DEVELOPMENT AT GEORGIA SOUTHERN COLLEGE. CONTENTS ARE: (1) INTRODUCTION, (2) ORGANIZATION, (3) RESEARCH AND DEVELOPMENT, (4) PRODUCTION, (5) MARKETING, (6) FINANCE AND CONTROL, (7) PERSONNEL ADMINISTRATION, (8) EXTERNAL RELATIONS, AND (9) SECRETARIAL AND LEGAL. EACH SECTION CONTAINS SUGGESTED STUDENT ACTIVITIES, INSTRUCTIONAL AIDS, TEACHER NOTES, AND COUNSELOR INTERACTION IN THE PROGRAM. APPENDED ARE VARIOUS INSTRUCTIONAL AIDS THAT MAY BE USED INCLUDING A LISTING OF NUMEROUS FILMS AND FILMSTRIPS. (GB)

VT 011 775

STEEB, RALPH V.; GEIL, JOHN J.

SAFETY IN INDUSTRIAL ARTS LABORATORIES. BULLETIN 76H-1.

FLORIDA STATE DEPT. OF EDUCATION, TALLAHASSEE.

PUB DATE - MAY69 86P.

DESCRIPTORS - *INDUSTRIAL ARTS; SAFETY EDUCATION; *LABORATORY SAFETY; ACCIDENT PREVENTION; SAFETY EQUIPMENT; SAFETY; *INSTRUCTIONAL MATERIALS

ABSTRACT - A REALLY EFFECTIVE SAFETY PROGRAM IS PRACTICED REGULARLY AND NATURALLY AS PART OF THE DAILY WORK. THIS MANUAL WAS DEVELOPED BY INDUSTRIAL ARTS CONSULTANTS TO HELP THE TEACHER DEVELOP WITHIN EACH STUDENT AN AWARENESS OF SAFETY THAT WILL CARRY THROUGH SCHOOL AND INTO POSTSCHOOL WORK AND RECREATION. THE PURPOSE OF SAFETY EDUCATION IS: (1) TO PROTECT THE STUDENT FROM INJURY WHILE IN THE SCHOOL SHOP OR LABORATORY, AND (2) TO DEVELOP HABITS, ATTITUDES, AND PERCEPTIONS WHICH WILL HELP INSURE HIS SAFETY THROUGHOUT HIS LIFETIME. MAJOR TOPICS INCLUDE: (1) SAFETY AND LIABILITY, (2) CAUSES

IND ARTS

53

OF ACCIDENTS, (3) PROVIDING FOR SAFETY, AND (4) SAFETY RULES, COVERING ALL AREAS OF INDUSTRIAL ARTS. APPENDED MATERIALS INCLUDE A NATIONAL STANDARD SAFETY INSPECTION CHECKLIST, ACCIDENT FORM, A SELECTED BIBLIOGRAPHY, AND LISTINGS OF POSTERS, CHARTS, FILMS AND FILMSTRIPS, AND CATALOGS AND DIRECTORIES. A SELECTED BIBLIOGRAPHY IS APPENDED. (GR)

VT 011 998 ED 047 088

ESHELBY, DON
BIBLIOGRAPHY OF INDUSTRIAL ARTS EDUCATION DOCUMENTS AS LISTED IN ABSTRACTS OF INSTRUCTIONAL MATERIALS IN VOCATIONAL AND TECHNICAL EDUCATION (AIM) FALL, 1967 TO FALL, 1969.

NORTH DAKOTA UNIV., GRAND FORKS. VOCATIONAL EDUCATION RESEARCH INFORMATION CENTER.
PUB DATE - SEP70 16P.

DESCRIPTORS - *INDUSTRIAL ARTS; *EDUCATIONAL RESEARCH; *BIBLIOGRAPHIES; *INSTRUCTIONAL MATERIALS; *RESOURCE MATERIALS; CURRICULUM PLANNING; PROGRAM PLANNING; PROGRAM DEVELOPMENT

ABSTRACT - THIS BIBLIOGRAPHY PRESENTS APPROXIMATELY 80 CITATIONS OF INSTRUCTIONAL MATERIALS PERTAINING TO INDUSTRIAL ARTS. THE ENTRIES WERE COMPILED FROM "ABSTRACTS OF INSTRUCTIONAL MATERIALS" (AIM) FROM FALL 1967 TO FALL 1969. AIM IS THE QUARTERLY PUBLICATION OF THE OHIO STATE UNIVERSITY WHICH ANNOUNCES THE AVAILABILITY OF INSTRUCTIONAL MATERIALS ACQUIRED AND PROCESSED BY THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) CLEARINGHOUSE ON VOCATIONAL AND TECHNICAL EDUCATION. ARRANGED IN NUMERICAL ORDER BY ACCESSION NUMBER, ENTRIES INCLUDE TITLE, NAME OF AUTHOR OR ORGANIZATION, DATE, NUMBER OF PAGES, AVAILABILITY INFORMATION, AND THE ISSUE OF AIM IN WHICH A BRIEF ABSTRACT APPEARS. ORDERING INSTRUCTIONS ARE INCLUDED. (GR)

VT 012 367

AFFHOLTER, GLENN H., AND OTHERS
ELECTRICITY--ELECTRONICS; CURRICULUM GUIDE FOR AN INTRODUCTORY COURSE.

MICHIGAN STATE DEPT. OF EDUCATION, LANSING.
PUB DATE - 68 32P.

DESCRIPTORS - *CURRICULUM GUIDES; TRADE AND INDUSTRIAL EDUCATION; *INDUSTRIAL ARTS; VOCATIONAL EDUCATION; *ELECTRICITY; *ELECTRONICS; *TEACHING GUIDES; ELECTRICIANS; SAFETY; ELECTRIC CIRCUITS; PROGRAM GUIDES

ABSTRACT - THIS CURRICULUM GUIDE WAS DEVELOPED BY A COMMITTEE, WITH ASSISTANCE FROM THE STATE CURRICULUM COMMITTEE FOR INDUSTRIAL ARTS, FOR THE MICHIGAN DEPARTMENT OF EDUCATION. IT IS FOR TEACHER USE IN DEVELOPING INTRODUCTORY ELECTRICITY-ELECTRONICS PROGRAMS FOR JUNIOR AND SENIOR HIGH SCHOOL STUDENTS. THE BULLETIN IS DESIGNED FOR USE IN COURSES WITH DIFFERENT TIME ALLOTMENTS, AND FOR EXPLORATORY, PREVOCATIONAL, VOCATIONAL, AND SCIENCE ORIENTED COURSES. THE CONTENTS INCLUDE BASIC

QUESTIONS ABOUT A PROGRAM, AN OUTLINE OF THE HISTORY OF THE SUBJECT, A UNIT ON SAFETY, AND 27 UNITS ON ELECTRICITY/ELECTRONICS THEORY WITH OBJECTIVES AND SUGGESTED ACTIVITIES PRESENTED IN EACH UNIT. A LIST OF TOOLS, SUPPLIES, AND EQUIPMENT IS APPENDED. (GEB)

VT 012 368

ARENT, WESLEY, AND OTHERS
INDUSTRIAL ARTS PROGRAMING FOR JUNIOR AND SENIOR HIGH SCHOOLS.

MICHIGAN STATE DEPT. OF EDUCATION, LANSING.
PUB DATE - JUL68 20P.

DESCRIPTORS - *INDUSTRIAL ARTS; *PROGRAM DEVELOPMENT; PROGRAM PLANNING; *SECONDARY SCHOOLS; *GUIDELINES; SCHOOL ACTIVITIES; *SCHOOL SHOPS; EDUCATIONAL OBJECTIVES; LABORATORY SAFETY; ORGANIZATION

ABSTRACT - TO HELP SCHOOLS KEEP YOUTH ABREAST OF CURRENT TECHNOLOGICAL DEVELOPMENTS, THIS BULLETIN WAS PREPARED FOR USE BY SCHOOL ADMINISTRATORS AND TEACHERS WHEN DEVELOPING COMPREHENSIVE INDUSTRIAL ARTS PROGRAMS. AIMED AT THE SECONDARY SCHOOLS, THE BULLETIN MAKES NO ATTEMPT TO ITEMIZE SUBJECT MATTER BUT RATHER IDENTIFIES THOSE ITEMS THAT SHOULD BE CONSIDERED IN DEVELOPING PROGRAMS OF INSTRUCTION. THIS INFORMATION INCLUDES: (1) GENERAL SUGGESTIONS FOR INDUSTRIAL ARTS PROGRAMS, (2) SUGGESTIONS REGARDING THE BASIC SUBJECT MATTER AREAS FOR LABORATORY ACTIVITIES ON THE JUNIOR HIGH LEVEL, (3) SUGGESTIONS CONCERNING THE SENIOR HIGH PROGRAM, AND (4) GENERAL PRINCIPLES OF SHOP PLANNING, SHOP SAFETY, STUDENT DIRECTED ORGANIZATION, AND COLLEGE ENTRANCE REQUIREMENTS. (JS)

VT 012 370

MECHANICAL AND ELECTRICAL TECHNOLOGY.
RESOURCE GUIDE FOR EFFECTIVE INSTRUCTION IN INDUSTRIAL ARTS. CURRICULUM BULLETIN NO. 138.

MINNESOTA STATE DEPT. OF EDUCATION, ST. PAUL. DOCUMENTS SECTION, MINNESOTA STATE DEPT. OF EDUCATION, ROOM 140, CENTENNIAL BUILDING, ST. PAUL, MINNESOTA 55101.
PUB DATE - 70 121P.

DESCRIPTORS - *CURRICULUM GUIDES; TEACHING METHODS; EDUCATIONAL INNOVATION; *INDUSTRIAL ARTS TEACHERS; *INDUSTRIAL ARTS; RESOURCE GUIDES; *ELECTRICITY; *FLUID POWER RESOURCE; ENGINES; EFFECTIVE OBJECTIVES; COGNITIVE OBJECTIVES; PSYCHOMOTOR OBJECTIVES

ABSTRACT - PREPARED FOR INDUSTRIAL ARTS TEACHERS. THIS CURRICULUM GUIDE HAS BEEN ORGANIZED FOR EFFICIENT UTILIZATION OF SEVERAL NEWER METHODOLOGICAL APPROACHES TO TEACHING. THE ORDER IN WHICH MATERIAL IS PRESENTED PLACES THE PSYCHOMOTOR, COGNITIVE, AND AFFECTIVE DOMAINS OF LEARNING ON A CONTINUUM WITH IMPLEMENTATION PROCEDURES. ARRANGED IN THREE SECTIONS ON ELECTRONICS, MECHANICAL POWER, AND FLUID POWER TECHNOLOGY, THE GUIDE PRESENTS MATERIAL IN THE CATEGORIES OF: (1) SKILLS STUDENTS WILL BE ABLE TO PERFORM, (2) CONCEPTS STUDENTS WILL UNDERSTAND, (3) APPRECIATIONS STUDENTS WILL

DEVELOP, AND (4) IMPLEMENTATION SUGGESTIONS. SOURCES OF RESOURCE MATERIALS ARE INCLUDED. TWO RELATED DOCUMENTS ARE AVAILABLE AS VT 012 371 AND VT 012 372, ALSO IN THIS ISSUE. (JS)

VT 012 371
MATERIALS TECHNOLOGY. RESOURCE GUIDE FOR EFFECTIVE INSTRUCTION IN INDUSTRIAL ARTS. CURRICULUM BULLETIN NO. 13C.

MINNESOTA STATE DEPT. OF EDUCATION, ST. PAUL. DOCUMENTS SECTION, MINNESOTA STATE DEPT. OF EDUCATION, ROOM 140, CENTENNIAL BUILDING, ST. PAUL, MINNESOTA 55101.
PUB DATE - 69 125P.

DESCRIPTORS - *CURRICULUM GUIDES; TEACHING METHODS; EDUCATIONAL INNOVATION; *INDUSTRIAL ARTS TEACHERS; *INDUSTRIAL ARTS; RESOURCE GUIDES; *PLASTICS; *METALS; WOODWORKING; AFFECTIVE OBJECTIVES; COGNITIVE OBJECTIVES; PSYCHOMOTOR OBJECTIVES

ABSTRACT - PREPARED FOR INDUSTRIAL ARTS TEACHERS, THIS CURRICULUM GUIDE HAS BEEN ORGANIZED FOR EFFICIENT UTILIZATION OF SEVERAL NEWER METHODOLOGICAL APPROACHES TO TEACHING. THE ORDER IN WHICH MATERIAL IS PRESENTED PLACES THE PSYCHOMOTOR, COGNITIVE, AND EFFECTIVE DOMAINS OF LEARNING ON A CONTINUUM WITH IMPLEMENTATION PROCEDURES. THREE SECTIONS, WOODS, METALS, AND PLASTICS TECHNOLOGY, LIST: (1) SKILLS STUDENTS WILL BE ABLE TO PERFORM, (2) CONCEPTS STUDENTS WILL UNDERSTAND, (3) APPRECIATIONS STUDENTS WILL DEVELOP, AND (4) IMPLEMENTATION SUGGESTIONS. SOURCES OF RESOURCE MATERIALS ARE PROVIDED, AND RELATED DOCUMENTS ARE AVAILABLE AS VT 012 370 AND VT 012 372, ALSO IN THIS ISSUE. (JS)

VT 012 372
VISUAL COMMUNICATION TECHNOLOGY. RESOURCE GUIDE FOR EFFECTIVE INSTRUCTION IN INDUSTRIAL ARTS.

MINNESOTA STATE DEPT. OF EDUCATION, ST. PAUL. CURR-BULL-13A
DOCUMENTS SECTION, MINNESOTA STATE DEPT. OF EDUCATION, ROOM 140, CENTENNIAL BUILDING, ST. PAUL, MINN. 55101.
PUB DATE - 70 82P.

DESCRIPTORS - *CURRICULUM GUIDES; TEACHING METHODS; EDUCATIONAL INNOVATION; *INDUSTRIAL ARTS TEACHERS; *INDUSTRIAL ARTS; RESOURCE GUIDES; *DRAFTING; *GRAPHIC ARTS; AFFECTIVE OBJECTIVES; COGNITIVE OBJECTIVES; PSYCHOMOTOR OBJECTIVES

ABSTRACT - PREPARED FOR INDUSTRIAL ARTS TEACHERS, THIS CURRICULUM GUIDE HAS BEEN ORGANIZED FOR EFFICIENT UTILIZATION OF SEVERAL NEWER METHODOLOGICAL APPROACHES TO TEACHING. THE ORDER IN WHICH MATERIAL IS PRESENTED PLACES THE PSYCHOMOTOR, COGNITIVE, AND AFFECTIVE DOMAINS OF LEARNING ON A CONTINUUM WITH IMPLEMENTATION PROCEDURES. TWO SECTIONS, DRAFTING AND GRAPHIC ARTS TECHNOLOGY, LIST: (1) SKILLS STUDENTS WILL BE ABLE TO PERFORM, (2) CONCEPTS STUDENTS WILL UNDERSTAND, (3) APPRECIATIONS STUDENTS WILL DEVELOP, AND (4) IMPLEMENTATION SUGGESTIONS. SOURCES OF RESOURCE MATERIALS ARE PROVIDED

IND ARTS

AND RELATED DOCUMENTS ARE AVAILABLE AS VT 012 370 AND VT 012 371, ALSO IN THIS ISSUE. (JS)

VT 012 741
BRAUN, DONALD, AND OTHERS
WOODWORK 1-2.

MILWAUKEE PUBLIC SCHOOLS, WIS. INDUSTRIAL ARTS DEPT.
PUB DATE - 62 42P.

DESCRIPTORS - *TEACHING GUIDES; CURRICULUM GUIDES; *INDUSTRIAL ARTS; *WOODWORKING; JUNIOR HIGH SCHOOLS; TESTS; VOCABULARY DEVELOPMENT; *LABORATORY SAFETY

ABSTRACT - DEVELOPED BY THE DIVISION OF CURRICULUM AND INSTRUCTION OF THE MILWAUKEE PUBLIC SCHOOLS, THIS TEACHING GUIDE WAS INTENDED FOR STUDENT AND TEACHER USE IN PRESENTING BASIC WOODWORKING FUNDAMENTALS IN THE JUNIOR HIGH SCHOOL INDUSTRIAL ARTS PROGRAMS. THE COURSE CONTENT, PLANNED ON THE BASIS OF 275 MINUTES PER WEEK, INCLUDES: (1) GENERAL INFORMATION CONCERNING INDUSTRIAL ARTS, (2) INTRODUCTION TO THE COURSE, (3) DIAGNOSTIC TEST, AND (4) 18 UNITS ON THE FUNDAMENTALS OF WOODWORKING WITH EACH UNIT CONTAINING A FIVE-COLUMN GUIDE. A TYPICAL BILL OF MATERIALS, PROCEDURE PLAN, TESTS, VOCABULARY WORDS, AND A BIBLIOGRAPHY ARE APPENDED. (GEB)

VT 012 748
ANDERSON, AGNER, AND OTHERS
DRAFTING (INSTRUCTIONAL SUPPLEMENT).

MILWAUKEE PUBLIC SCHOOLS, WIS. DEPT. OF ELEMENTARY AND SECONDARY EDUCATION.
PUB DATE - 69 106P.

DESCRIPTORS - *VOCATIONAL EDUCATION; SUPPLEMENTARY TEXTBOOKS; *RESOURCE MATERIALS; *DRAFTING; *DRAFTSMEN; SECONDARY EDUCATION; INDUSTRIAL ARTS; *TRADE AND INDUSTRIAL EDUCATION

ABSTRACT - DEVELOPED BY DRAFTING INSTRUCTORS IN THE MILWAUKEE PUBLIC SCHOOLS IN COOPERATION WITH A CURRICULUM ADVISORY COMMITTEE, THIS CURRICULUM SUPPLEMENT IS A COLLECTION OF INDIVIDUAL RESOURCE UNITS INCLUDING BIBLIOGRAPHIES FOR USE IN JUNIOR HIGH AND HIGH SCHOOLS. THE PUBLICATION, DESIGNED TO ASSIST INSTRUCTORS OF DRAFTING, PRESENTS CURRENT INDUSTRIAL PRACTICES WHICH INCLUDE: (1) LEVELS OF DRAFTING OCCUPATIONS, (2) KINDS OF DRAFTING ACTIVITIES, (3) STANDARDS, (4) DOCUMENTATION, (5) ENGINEERING DRAWING CHANGES, (6) DIMENSIONING, (7) DRAWING MEDIA, AND (8) MICROFILMING. FOR THE CONVENIENCE OF INSTRUCTORS WHO MIGHT EXPERIENCE DIFFICULTY IN SECURING PRINTS FROM INDUSTRY, VARIOUS INDUSTRIAL PRINTS ARE APPENDED. (LM)

VT 012 752
MECHANICAL DRAWING 1-4. A GUIDE FOR INDUSTRIAL ARTS TEACHERS.

MILWAUKEE PUBLIC SCHOOLS, WIS. DEPT. OF SECONDARY CURRICULUM AND INSTRUCTION.

IND ARTS

PUB DATE - 66 51P.

DESCRIPTORS - *CURRICULUM GUIDES; *INDUSTRIAL ARTS; *DRAFTING; *TEACHING GUIDES; ORTHOGONAL PROJECTION; BIBLIOGRAPHIES; SECONDARY GRADES

ABSTRACT - THIS CURRICULUM GUIDE IS FOR INSTRUCTOR USE IN TEACHING THE FUNDAMENTALS OF MECHANICAL DRAWING IN SECONDARY SCHOOL INDUSTRIAL ARTS, AND WAS DEVELOPED BY THE DIVISION OF CURRICULUM AND INSTRUCTION OF THE MILWAUKEE PUBLIC SCHOOLS. THE OBJECTIVES ARE DESIGNED TO ACQUAINT THE STUDENT WITH THE DRAFTING LANGUAGE OF INDUSTRY AND TO DEVELOP SOME BASIC SKILLS IN USING THAT LANGUAGE. THE MATERIAL, TO BE USED OVER A 2-YEAR PERIOD, IS PRESENTED IN A SEVEN-COLUMN FORMAT AND INCLUDES TEXTBOOK ASSIGNMENTS. A LIST OF SUPPLEMENTARY AIDS, A SAMPLE MEASURING TEST, AND A BIBLIOGRAPHY ARE INCLUDED. (GEB)

VT 012 754

BRAUN, DONALD, AND OTHERS
7B WOODWORK.

MILWAUKEE PUBLIC SCHOOLS, WIS. INDUSTRIAL ARTS DEPT.
PUB DATE - 62 43P.

DESCRIPTORS - *TEACHING GUIDES; CURRICULUM GUIDES; *INDUSTRIAL ARTS; *WOODWORKING; JUNIOR HIGH SCHOOLS; TESTS; VOCABULARY DEVELOPMENT

ABSTRACT - THIS TEACHING GUIDE, DESIGNED FOR TEACHER AND STUDENT USE IN THE INDUSTRIAL ARTS WOODWORKING PROGRAMS OF JUNIOR HIGH SCHOOLS, WAS DEVELOPED BY THE DIVISION OF CURRICULUM AND INSTRUCTION OF THE MILWAUKEE PUBLIC SCHOOLS. THE MATERIAL IS PLANNED ON THE BASIS OF 275 MINUTES PER WEEK. INCLUDED IN THE COURSE ARE 15 UNITS COVERING SOME OF THE FUNDAMENTALS OF WOODWORKING, WITH EACH UNIT BROKEN INTO A FIVE-COLUMN GUIDE ORGANIZED BY: (1) BASIC SKILLS, (2) BASIC UNDERSTANDINGS, (3) SUGGESTED INSTRUCTIONAL AIDS, (4) SUGGESTED PROJECTS, AND (5) INSTRUCTOR NOTES. INSTRUCTION SHEETS, TESTS, VOCABULARY TERMS, AND A REFERENCE LIST ARE APPENDED. (GEB)

VT 012 759

INDUSTRIAL ARTS AEROSPACE FOR INTERMEDIATE AND JUNIOR HIGH SCHOOLS. EXPERIMENTAL MATERIALS, FIRST DRAFT.

NEW YORK CITY BOARD OF EDUCATION, BROOKLYN, N.Y. BUREAU OF CURRICULUM DEVELOPMENT.
PROJECT NO. 5511.
PUB DATE - AUG70 135P.

DESCRIPTORS - *INDUSTRIAL ARTS; *STUDENT PROJECTS; *INSTRUCTIONAL MATERIALS; *RESOURCE MATERIALS; *EXPERIMENTAL CURRICULUM; CURRICULUM GUIDES; AEROSPACE TECHNOLOGY; INDUSTRIAL EDUCATION; INTERMEDIATE GRADES; JUNIOR HIGH SCHOOLS; ILLUSTRATIONS; INDIVIDUALIZED INSTRUCTION

ABSTRACT - THIS 20-WEEK EXPERIMENTAL CURRICULUM BULLETIN FOR INTERMEDIATE AND JUNIOR HIGH SCHOOLS WAS PREPARED BY THE NEW YORK CITY BUREAU OF CURRICULUM DEVELOPMENT. A

55
SUGGESTED PROGRAM SCHEDULE OUTLINES TOPICS IN INTRODUCTION TO FLIGHT, SUPPORT SYSTEMS, AND SPACE AND ROCKETS, INCLUDING SUGGESTED PROJECTS, INSTRUCTIONAL CONTENT, AND RELATED INFORMATION FOR EACH TOPIC. DETAILED INFORMATION IN THE FORM OF TEXTUAL MATERIAL AND DIRECTIONS FOR MAKING A WIND TUNNEL AND OTHER STUDENT PROJECTS IS PROVIDED FOR THE INTRODUCTION TO FLIGHT TOPIC. ADDITIONAL PROJECT DIRECTIONS AND INFORMATION ARE APPENDED. (SB)

VT 012 899

WOODWARD, ROBERT L.; MYERS, NORMAN L.
INDUSTRIAL ARTS POWER MECHANICS. APPLYING SCIENTIFIC PRINCIPLES TO POWER, ENERGY, AND FORCE.

CALIFORNIA STATE DEPT. OF EDUCATION,
SACRAMENTO.
PUB DATE - 70 145P.

DESCRIPTORS - *STATE CURRICULUM GUIDES; *INDUSTRIAL ARTS; *POWER MECHANICS; *SCIENTIFIC PRINCIPLES; *CURRICULUM DEVELOPMENT; SECONDARY GRADES; PUBLIC SCHOOLS; COURSE CONTENT; TRADE AND INDUSTRIAL EDUCATION; JUNIOR HIGH SCHOOLS

ABSTRACT - THIS CURRICULUM GUIDE WAS DEVELOPED BY AN NDEA INDUSTRIAL ARTS-SCIENCE CURRICULUM COMMITTEE AND AN NDEA INDUSTRIAL ARTS-SCIENCE EDITORIAL COMMITTEE DURING WORKSHOPS CONDUCTED IN CALIFORNIA AND IT IS DESIGNED FOR INSTRUCTOR USE IN PREPARING OR REVISING POWER MECHANICS COURSES IN JUNIOR OR SENIOR HIGH SCHOOL INDUSTRIAL ARTS. THE MATERIAL COMPLIES WITH THE OBJECTIVES OF THE INDUSTRIAL ARTS PROGRAMS IN CALIFORNIA SCHOOLS, AND THE CONTENT APPLIES THE PRINCIPLES RELATING TO POWER, ENERGY, AND FORCE. SECTIONS ARE: (1) NATURAL POWER, (2) MECHANICAL POWER, (3) STEAM POWER, (4) THERMAL POWER, (5) ELECTRICAL POWER, (6) HYDRAULIC POWER, AND (7) PNEUMATIC POWER. COURSE OUTLINES FOR POWER AND AUTOMOTIVE MECHANICS, BATTERY TERMINOLOGY, AND ASSIGNMENT SHEETS ARE APPENDED, AND SELECTED REFERENCES ARE INCLUDED. (GER)

VT 013 061

INDUSTRIAL ARTS FOR IOWA SCHOOLS.

IOWA STATE DEPT. OF PUBLIC INSTRUCTION, DES MOINES.
PUBLICATIONS SECTION, DEPARTMENT OF PUBLIC INSTRUCTION, GRIMES STATE OFFICE BUILDING, DES MOINES, IOWA 50319 (\$1.00).
PUB DATE - 69 171P.

DESCRIPTORS - *INDUSTRIAL ARTS; METALS; POWER MECHANICS; DRAFTING; PLASTICS; ELECTRICITY; WOODWORKING; *LEARNING ACTIVITIES; GRAPHIC ARTS; *RESOURCE MATERIALS; EVALUATION; *STATE CURRICULUM GUIDES; *PROGRAM DESIGN; EQUIPMENT; SECONDARY GRADES

ABSTRACT - DEVELOPED BY THE IOWA DEPARTMENT OF PUBLIC INSTRUCTION WITH THE COOPERATION OF EDUCATIONAL PERSONNEL, THIS CURRICULUM GUIDE IS DESIGNED FOR THE INSTRUCTOR'S USE IN PLANNING INDUSTRIAL ARTS PROGRAMS AND ACTIVITIES. A DEFINITION, PHILOSOPHY, AND

SPECIFIC OBJECTIVES FOR INDUSTRIAL ARTS ARE STATED. OTHER UNITS CONSIDERED IN THE FIRST PART OF THIS DOCUMENT INCLUDE: (1) REQUISITES OF QUALITY INDUSTRIAL ARTS, (2) SCOPE AND SEQUENCE OF INDUSTRIAL ARTS PROGRAMS, (3) SELECTED ASPECTS OF ORGANIZATION AND ADMINISTRATION, (4) PURPOSEFUL TEACHING, (5) MEASUREMENT OF STUDENT ACHIEVEMENT, AND (6) USEFUL INFORMATION FOR THE TEACHER AS A PROFESSIONAL. THE SECOND PART CONTAINS BACKGROUND INFORMATION, LEARNING ACTIVITIES, SELECTED INSTRUCTIONAL AIDS OR SOURCES, EQUIPMENT, AND SUPPLIES OF TOOLS AND EQUIPMENT FOR EIGHT SPECIFIC AREAS OF INDUSTRIAL ARTS. (GEB)

INDEXES

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
ACCIDENT PREVENTION		ANNOTATED BIBLIOGRAPHIES	
VT 008 071	33	VT 004 684	13
INDUSTRIAL ARTS; SAFETY GUIDE.		REFERENCE AND AUDIO-VISUAL	
VT 009 942	44	MATERIALS ON IRON AND STEEL. A	
ED 035 733		TEACHER'S GUIDE.	
AN ACCIDENT PREVENTION PROGRAM FOR			
SCHOOL SHOPS AND LABORATORIES; A		ART APPRECIATION	
SUGGESTED GUIDE FOR SCHOOL		VT 009 306	41
ADMINISTRATORS.		APPLIED DESIGN.	
ADHESIVES		ARTS AND CRAFTS	
VT 007 858	31	VT 009 704	42
ED 031 557		ARTS AND CRAFTS FOR K TO 6.	
ADHESIVES; A BASE SYLLABUS ON WOOD			
TECHNOLOGY.			
ADMINISTRATIVE POLICY		AUTO MECHANICS	
VT 006 462	20	VT 006 235	17
INDUSTRIAL ARTS TEACHERS' HANDBOOK.		BASIC AUTOMOBILE MECHANICS, CENTRAL	
		HIGH SCHOOL, GRADES 9 AND 10.	
		VT 008 383	37
ADMINISTRATOR GUIDES		INDUSTRIAL ARTS. AUTOMOTIVE	
VT 000 847	4	MECHANICS GUIDE.	
A GUIDE FOR INDUSTRIAL ARTS IN CHIC		VT 011 497	51
SCHOOLS, SECOND EDITION.		SAFETY IN THE AUTO SHOP.	
VT 002 504	9		
ADMINISTRATIVE GUIDELINES FOR			
INDUSTRIAL EDUCATION, GRADES 7-12.		AUTO MECHANICS (OCCUPATION)	
VT 009 899	43	VT 006 235	17
A TENTATIVE GUIDE FOR IMPLEMENTING		BASIC AUTOMOBILE MECHANICS, CENTRAL	
INDUSTRIAL ARTS EDUCATION.		HIGH SCHOOL, GRADES 9 AND 10.	
CURRICULUM GUIDE 1.		VT 011 496	51
		COMPONENTS OF THE AUTOMOBILE.	
AEROSPACE INDUSTRY		AUTOINSTRUCTIONAL AIDS	
VT 008 269	36	VT 006 998	24
ED 026 273		BASIC ELECTRICITY; STUDENT	
SPACE RESOURCES FOR THE HIGH		WORKBOOK, INSTRUCTORS GUIDE AND	
SCHOOL. INDUSTRIAL ARTS RESOURCE		TESTS.	
UNITS.		VT 011 496	51
		COMPONENTS OF THE AUTOMOBILE.	
		VT 011 497	51
AEROSPACE TECHNOLOGY		SAFETY IN THE AUTO SHOP.	
VT 007 334	26	VT 011 498	51
FABRICATION TECHNIQUES FOR TURBINE		GEOMETRY OF DRAWING, DRAFTING.	
COMPONENTS.		VT 011 502	51
VT 008 269	36	DIMENSIONING RULES AND PRINCIPLES.	
ED 026 273		LAP NO. 11.	
SPACE RESOURCES FOR THE HIGH			
SCHOOL. INDUSTRIAL ARTS RESOURCE		AVIATION TECHNOLOGY	
UNITS.		VT 010 737	47
VT 010 737	47	DEMONSTRATION AIDS FOR AVIATION	
DEMONSTRATION AIDS FOR AVIATION		EDUCATION.	
EDUCATION.			
		BIBLIOGRAPHIES	
AIR AGE		VT 000 887	4
VT 010 737	47	THE PROGRAM OF INDUSTRIAL ARTS	
DEMONSTRATION AIDS FOR AVIATION		EDUCATION IN KENTUCKY. EDUCATIONAL	
EDUCATION.		BULLETIN, V. 31, NO. 8.	
		VT 001 858	7
AIRBRUSHES		CAREER EDUCATION RESOURCE GUIDE.	
VT 004 806	14	VT 003 713	12
TEACHER GUIDE FOR AIRBRUSH.		STATE ADOPTED TEXTBOOKS FOR	
		INDUSTRIAL ARTS IN INDIANA.	
ALBERTA		VT 005 128	14
VT 010 439	45	REVISED APPROVED BOOK LIST,	
JUNIOR HIGH SCHOOL CURRICULUM GUIDE		INDUSTRIAL ARTS, GRADES K-12.	
FOR INDUSTRIAL ARTS.			
AMERICAN INDUSTRY PROJECT			
VT 002 860	10		
AMERICAN INDUSTRY TECHNICAL REPORT,			
1965-66.			

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT 010 315 FD 037 557	45	CONCEPTUAL SCHEMES	
DEVELOPMENT AND STRUCTURE OF		VT 009 072 ED 031 594	40
INDUSTRY: INSTRUCTIONAL AIDS LIST		DEVELOPING AMERICAN INDUSTRY	
AND BIBLIOGRAPHY.		COURSES FOR THE SECONDARY SCHOOL.	
VT 011 998 ED 047 088	53	CONSTRUCTION	
BIBLIOGRAPHY OF INDUSTRIAL ARTS		VT 007 850 ED 028 266	30
EDUCATION DOCUMENTS.		GUIDES IN CONSTRUCTION AND	
BUILDING MATERIALS		MANUFACTURING FOR ELEMENTARY SCHOOL	
VT 007 859 ED 031 558	31	INDUSTRIAL ARTS. K-2; 3-4; 5-6.	
LUMBER AND RELATED PRODUCTS; A BASE		CORRELATION	
SYLLABUS ON WOOD TECHNOLOGY.		VT 003 553	11
CAREER GUIDANCE SERIES		DRAFTING EXPERIENCES FOR	
VT 000 239	2	INTERMEDIATE SCHOOL PUPILS.	
INDUSTRIAL ARTS SUPPLEMENT.		COURSE CONTENT	
CAREER PLANNING		VT 002 650	10
VT 001 319	6	GUIDE LINES FOR THE JUNIOR HIGH	
INDUSTRIAL ARTS.		SCHOOL INDUSTRIAL ARTS PROGRAM.	
CARPENTERS		VT 004 343	12
VT 006 661	21	INDUSTRIAL ARTS METALWORKING.	
AN INSTRUCTIONAL GUIDE FOR		VT 008 184 ED 033 193	34
INDUSTRIAL WOODWORKING.		COURSE OUTLINE AND RESOURCE	
CERAMICS		MATERIALS FOR FLUID POWER	
VT 002 002 ED 021 963	7	INSTRUCTION IN SECONDARY SCHOOLS,	
CERAMICS, PROJECT IDEAS FOR		PREPARED AT THE NDEA SUMMER	
INDUSTRIAL ARTS.		INSTITUTE 1968.	
CHARTS		VT 011 086	47
VT 010 301	44	INDUSTRIAL ARTS.	
SAFE USE OF HAND AND PORTABLE POWER		VT 011 748	52
TOOLS.		FUNCTIONS OF INDUSTRY.	
CHECKLISTS		COURSE DESCRIPTIONS	
VT 006 978	22	VT 005 593	15
PERFORMANCE CHECKLIST NO. 1; THE		INTRODUCTION TO THE TECHNICAL CORES	
PRE-EXPANSION OF EXPANDABLE		I AND II.	
POLYSTYRENE BEADS.		VT DC8 004.	32
CHEMICAL REACTIONS		A STUDY OF MANUFACTURING	
VT 010 644	46	INDUSTRIES. AN EXPERIMENTAL COURSE	
FIRE CHEMISTRY.		AT THE JUNIOR HIGH SCHOOL LEVEL	
CLASS MANAGEMENT		COMBINING STUDENTS OF GRADES SEVEN,	
VT 008 664	38	EIGHT, AND NINE.	
A GUIDE TO BETTER TEACHING.		VT 011 363	48
CLASSROOM FURNITURE		INDUSTRIAL ARTS CURRICULUM GUIDE	
VT 007 308	26	FOR THE STATE OF WYOMING GRADES	
EQUIPMENT, TOOLS AND MATERIALS, AS		K-12.	
PROPOSED BY THE TECHNOLOGY FOR		COURSE ORGANIZATION	
CHILDREN PROJECT.		VT 008 734	39
CLASSROOM TECHNIQUES		POWER: PRIME MOVER OF TECHNOLOGY.	
VT 008 664	38	TEACHER'S MANUAL.	
A GUIDE TO BETTER TEACHING.		CURRICULUM	
COLLEGE BOUND STUDENTS		VT 000 847	4
VT 009 288	41	A GUIDE FOR INDUSTRIAL ARTS IN OHIO	
A TECHNICAL DRAWING COURSE FOR		SCHOOLS, SECOND EDITION.	
COLLEGE-PREPARATORY STUDENTS.		VT 008 238	34
COMMUNICATIONS		A GUIDE TO IMPROVEMENT OF	
VT 008 872	39	INDUSTRIAL ARTS IN OKLAHOMA SCHOOLS	
INDUSTRIAL ARTS CURRICULUM GUIDE:		GRADES 7-12.	
INDUSTRIAL ARTS, 1968-1969.		CURRICULUM DESIGN	
		VT 005 595 ED 020 429	15
		STRUCTURE AND CONTENT FOUNDATIONS	
		FOR CURRICULUM DEVELOPMENT.	

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
CURRICULUM DEVELOPMENT		VT 002 004	8
VT 002 860	10	AN EXPERIMENTAL RESOURCE UNIT IN	
AMERICAN INDUSTRY TECHNICAL REPORT,		PLASTICS FOR INDUSTRIAL ARTS.	
1965-66.		VT 002 009 ED 022 843	9
VT 005 595 ED 020 429	15	INDUSTRIAL ARTS HUMANITIES MEDIA	
STRUCTURE AND CONTENT FOUNDATIONS		GUIDE: CUE.	
FOR CURRICULUM DEVELOPMENT.		VT 002 650	10
VT 007 459 ED 024 822	28	GUIDE LINES FOR THE JUNIOR HIGH	
THE DEVELOPMENT OF A COURSE OF		SCHOOL INDUSTRIAL ARTS PROGRAM.	
STUDY FOR INDUSTRIAL ARTS EDUCATION		VT 002 778 ED 022 849	10
AT THE ELEMENTARY SCHOOL LEVEL.		INDUSTRIAL ARTS; A GUIDE FOR	
VT 009 072 ED 031 594	40	COLORADO SCHOOLS.	
DEVELOPING AMERICAN INDUSTRY		VT 003 271	11
COURSES FOR THE SECONDARY SCHOOL.		INDUSTRIAL ARTS CURRICULUM PLANNING	
VT 010 314 ED 037 556	45	GUIDE, GRADES 7-12.	
DEVELOPMENT AND STRUCTURE OF		VT 003 977	12
INDUSTRY: STUDY GUIDE.		JUNIOR HIGH SCHOOL METALS, A	
VT 011 399 ED 040 303	48	CURRICULUM GUIDE.	
INDIVIDUALIZED MATERIAL FOR		VT 003 978	12
INDUSTRIAL EDUCATION BASED ON THE		WOOD AND PLASTIC, A GUIDE FOR	
AVA BOOKLET "A GUIDE TO IMPROVING		GRADES 10-11-12.	
INSTRUCTION IN INDUSTRIAL ARTS".		VT 004 343	12
VT 012 899	55	INDUSTRIAL ARTS METALWORKING.	
INDUSTRIAL ARTS POWER MECHANICS.		VT 004 851	14
		GENERAL INDUSTRIAL ARTS	
CURRICULUM ENRICHMENT		(MANUFACTURING),	
VT 007 464	28	VT 005 164	14
INDUSTRIAL ARTS ENRICHMENT		EARLY SECONDARY INDUSTRIAL ARTS.	
EXPERIENCES IN THE ELEMENTARY		VT 005 279	15
SCHOOL. GRADES FIVE AND SIX.		THE PRE-TECHNICAL PROJECT.	
		VT 005 650	16
CURRICULUM EVALUATION		STATE CURRICULUM GUIDE FOR	
VT 003 035	11	INDUSTRIAL ARTS AND VOCATIONAL	
INDUSTRIAL ARTS IN GENERAL		ELECTRICITY-ELECTRONICS.	
EDUCATION.		VT 005 914	16
		INSTRUCTOR'S GUIDE FOR PRINTING 1	
CURRICULUM GUIDES		AND 2.	
VT 000 333	2	VT 005 915	16
GUIDELINES FOR INDUSTRIAL ARTS		INSTRUCTOR'S GUIDE FOR SENIOR HIGH	
INSTRUCTION.		SCHOOL WOODWORK IN THE TULSA PUBLIC	
VT 000 398	3	SCHOOLS (TENTATIVE).	
INDUSTRIAL ARTS CURRICULUM GUIDE		VT 006 247	18
FOR ELECTRICITY IN OHIO SCHOOLS.		INDUSTRIAL ARTS CURRICULUM GUIDE	
VT 000 467	3	FOR METALS.	
GRAPHIC ARTS.		VT 006 248	18
VT 000 887	4	INDUSTRIAL ARTS CURRICULUM GUIDE	
THE PROGRAM OF INDUSTRIAL ARTS		FOR WOODWORKING.	
EDUCATION IN KENTUCKY. EDUCATIONAL		VT 006 249	19
BULLETIN, V. 31, NO. 8.		INDUSTRIAL ARTS CURRICULUM GUIDE	
VT 000 898	4	FOR POWER MECHANICS.	
INDUSTRIAL ARTS CURRICULUM GUIDE		VT 006 260	19
FOR SEVENTH AND EIGHTH GRADES.		DRAFTING 1.	
VT 000 978	5	VT 006 262	19
INDUSTRIAL ARTS		ELECTRICITY 1.	
ELECTRICITY--ELECTRONICS, GRADES		VT 006 323	20
7-12.		INDUSTRIAL ARTS INSTRUCTIONAL GUIDE	
VT 000 979	5	FOR GRADES K-6. ELEMENTARY SCHOOL.	
WOODWORKING, GRADES 7-12; A		PRACTICAL ARTS.	
TENTATIVE BULLETIN.		VT 006 452	20
VT 000 980	5	INDUSTRIAL ARTS GRADES 7-8.	
DRAFTING, GRADES 7-12.		(TENTATIVE).	
VT 001 479	6	VT 006 597	20
INDUSTRIAL EDUCATION IN HAMPTON		INDUSTRIAL ARTS, DRAFTING 1.	
SCHOOL SYSTEM, 1966-1967.		TEACHER'S GUIDE.	
VT 001 686	7	VT 006 650	21
INDUSTRIAL ARTS		GENERAL METAL WORK 1 AND 2. COURSE	
ELECTRICITY-ELECTRONICS, GRADES		OF STUDY.	
7-12. COURSE GUIDE.			

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT 006 661	21	VT 009 194	41
AN INSTRUCTIONAL GUIDE FOR		SENIOR HIGH SCHOOL INDUSTRIAL ARTS.	
INDUSTRIAL WOODWORKING.		VT 009 674	42
VT 006 765	21	POWER MECHANICS.	
GRAPHIC ARTS 1 AND 2. COURSE OF		VT 009 704	42
STUDY.		ARTS AND CRAFTS FOR K TO 6.	
VT 007 454	28	VT 009 706	43
ED 024 822		METALWORKING; VOCATIONAL-INDUSTRIAL	
THE DEVELOPMENT OF A COURSE OF		EDUCATION CURRICULUM GUIDE.	
STUDY FOR INDUSTRIAL ARTS EDUCATION		CURRICULUM BULLETIN SERIES.	
AT THE ELEMENTARY SCHOOL LEVEL.		VT 009 899	43
VT 007 464	28	A TENTATIVE GUIDE FOR IMPLEMENTING	
INDUSTRIAL ARTS ENRICHMENT		INDUSTRIAL ARTS EDUCATION.	
EXPERIENCES IN THE ELEMENTARY		CURRICULUM GUIDE 1.	
SCHOOL. GRADES FIVE AND SIX.		VT 010 439	45
VT 007 730	29	JUNIOR HIGH SCHOOL CURRICULUM GUIDE	
INDUSTRIAL ARTS; A STUDY OF		FOR INDUSTRIAL ARTS.	
INDUSTRIAL TECHNOLOGY. INTERIM		VT 010 605	46
BULLETIN.		METALWCRK 1-2.	
VT 007 850	30	VT 010 613	46
ED 028 266		FUNDAMENTALS OF ELECTRICITY AND	
GUIDES IN CONSTRUCTION AND		ELECTRONICS.	
MANUFACTURING FOR ELEMENTARY SCHOOL		VT 011 086	47
INDUSTRIAL ARTS. K-2; 3-4; 5-6.		INDUSTRIAL ARTS.	
VT 007 857	30	VT 011 087	47
ED 031 556		INDUSTRIAL ARTS CURRICULUM GUIDE.	
LAMINATING AND BENDING; A BASE		VT 011 295	47
SYLLABUS ON WOOD TECHNOLOGY.		CURRICULUM GUIDE IN METALS, GRADES	
VT 007 858	31	SEVEN THROUGH TWELVE.	
ED 031 557		VT 011 363	48
ADHESIVES; A BASE SYLLABUS ON WOOD		INDUSTRIAL ARTS CURRICULUM GUIDE	
TECHNOLOGY.		FOR THE STATE OF WYOMING GRADES	
VT 007 859	31	K-12.	
ED 031 558		VT 012 367	53
LUMBER AND RELATED PRODUCTS; A BASE		ELECTRICITY--ELECTRONICS;	
SYLLABUS ON WOOD TECHNOLOGY.		CURRICULUM GUIDE FOR AN	
VT 007 860	31	INTRODUCTORY COURSE.	
ED 031 559		VT 012 370	53
WOOD SUBSTITUTES; A BASE SYLLABUS		MECHANICAL AND ELECTRICAL	
ON WOOD TECHNOLOGY.		TECHNOLOGY. RESOURCE GUIDE FOR	
VT 007 861	31	EFFECTIVE INSTRUCTION IN INDUSTRIAL	
ED 031 560		ARTS.	
WOOD PROPERTIES AND KINDS; A BASE		VT 012 371	54
SYLLABUS ON WOOD TECHNOLOGY.		MATERIALS TECHNOLOGY. RESOURCE	
VT 007 864	32	GUIDE FOR EFFECTIVE INSTRUCTION IN	
INDUSTRIAL ARTS GRAPHIC		INDUSTRIAL ARTS.	
COMMUNICATIONS 10, 20, 30.		VT 012 372	54
VT 007 934	32	VISUAL COMMUNICATION TECHNOLOGY.	
JUNIOR HIGH SCHOOL CURRICULUM GUIDE		RESOURCE GUIDE FOR EFFECTIVE	
FOR INDUSTRIAL ARTS.		INSTRUCTION IN INDUSTRIAL ARTS.	
VT 008 052	33	VT 012 752	54
INDUSTRIAL ARTS.		MECHANICAL DRAWING 1-4. A GUIDE FOR	
VT 008 253	35	INDUSTRIAL ARTS TEACHERS.	
INDUSTRIAL ARTS SYLLABUS IN		CURRICULUM PLANNING	
TRANSPORTATION.		VT 000 508	3
VT 008 537	38	INDUSTRIAL ARTS PROGRAMING FOR THE	
VOCATIONAL INDUSTRIAL DRAFTING. A		HIGH SCHOOL. (BULLETIN, NO. 2148).	
TEACHER'S OUTLINE.		VT 009 704	42
VT 008 562	38	ARTS AND CRAFTS FOR K TO 6.	
ED 033 195		DEMONSTRATIONS (EDUCATIONAL)	
INDUSTRIAL ARTS AND VOCATIONAL		VT 007 363	26
EDUCATION IN GRADES K-12. FINAL		TEACHING AIDS IN ELECTRICITY.	
REPORT.		VT 010 737	47
VT 008 734	39	DEMONSTRATION AIDS FOR AVIATION	
POWER; PRIME MOVER OF TECHNOLOGY.		EDUCATION.	
TEACHER'S MANUAL.			
VT 008 872	39		
INDUSTRIAL ARTS CURRICULUM GUIDE:			
INDUSTRIAL ARTS, 1968-1969.			
VT 008 993	40		
WOODWORKING; VOCATIONAL-INDUSTRIAL			
EDUCATION CURRICULUM GUIDE.			
VT 009 081	40		
A SUGGESTED GUIDE FOR TEACHING SLOW			
LEARNERS IN INDUSTRIAL ARTS IN THE			
PUBLIC SCHOOLS.			

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
DESIGN		VT 011 491	50
VT 007 972	32	AUXILIARY VIEWS, LAP--UNIT VII.	
DESIGN FOR WELDING. SOME PRACTICAL		ENGINEERING 20, BASIC DRAFTING.	
CONSIDERATIONS IN DESIGNING STEEL		VT 011 492	50
WELDMENTS.		SECTIONAL VIEWS, LAP--UNIT VIII.	
DESIGN CRAFTS		ENGINEERING 20, BASIC DRAFTING.	
VT 009 306	41	VT 011 493	50
APPLIED DESIGN.		DIMENSIONING LAP--UNIT IX.	
DISCOVERY LEARNING		ENGINEERING 20, BASIC DRAFTING.	
VT 005 593	15	VT 011 494	50
INTRODUCTION TO THE TECHNICAL CORES		WORKING DRAWINGS, LAP--UNIT X.	
I AND II.		ENGINEERING 20, BASIC DRAFTING.	
DRAFTING		VT 011 498	51
VT 000 980	5	GEOMETRY OF DRAWING, DRAFTING.	
DRAFTING, GRADES 7-12.		VT 011 502	51
VT 003 553	11	DIMENSIONING RULES AND PRINCIPLES.	
DRAFTING EXPERIENCES FOR		LAP NO. 11.	
INTERMEDIATE SCHOOL PUPILS.		VT 011 507	52
VT 006 236	18	PICTORIAL DRAWINGS.	
DRAFTING STANDARDS MANUAL.		DRAFTING--LANGUAGE OF INDUSTRY. LAP	
VT 006 246	18	NO. 8, BASIC DRAFTING.	
INDUSTRIAL ARTS CURRICULUM GUIDE		VT 012 372	54
FOR DRAFTING.		VISUAL COMMUNICATION TECHNOLOGY.	
VT 006 260	19	RESOURCE GUIDE FOR EFFECTIVE	
DRAFTING I.		INSTRUCTION IN INDUSTRIAL ARTS.	
VT 006 597	20	VT 012 748	54
INDUSTRIAL ARTS, DRAFTING I.		DRAFTING (INSTRUCTIONAL	
TEACHER'S GUIDE.		SUPPLEMENT).	
VT 006 598	21	VT 012 752	54
DRAFTING I. STUDENT PROBLEMS.		MECHANICAL DRAWING 1-4. A GUIDE FOR	
VT 008 381	36	INDUSTRIAL ARTS TEACHERS.	
INDUSTRIAL ARTS. DRAFTING GUIDE.		DRAFTSMEN	
VT 008 465	38	VT 008 537	38
TWENTY-EIGHT INDUSTRIAL ARTS FILMS		VOCATIONAL INDUSTRIAL DRAFTING. A	
FROM MCGRAW-HILL.		TEACHER'S OUTLINE.	
VT 009 288	41	VT 012 748	54
A TECHNICAL DRAWING COURSE FOR		DRAFTING (INSTRUCTIONAL	
COLLEGE-PREPARATORY STUDENTS.		SUPPLEMENT).	
VT 009 658	42	EDUCATION PROFESSIONS DEVELOPMENT ACT	
GUIDELINES FOR ESTABLISHING AND		VT 011 748	52
EVALUATING DRAFTING AND DESIGN		FUNCTIONS OF INDUSTRY.	
TECHNOLOGY PROGRAMS.		EDUCATIONAL EQUIPMENT	
VT 011 334	48	VT 007 308	26
BEGINNING DRAFTING. A HANDBOOK FOR		EQUIPMENT, TOOLS AND MATERIALS, AS	
GRADES SEVEN AND EIGHT.		PROPOSED BY THE TECHNOLOGY FOR	
VT 011 485	49	CHILDREN PROJECT.	
LETTERING, LAP--UNIT I. ENGINEERING		EDUCATIONAL EXPERIMENTS	
20, BASIC DRAFTING.		VT 007 363	26
VT 011 486	49	TEACHING AIDS IN ELECTRICITY.	
INSTRUMENT TECHNIQUE, LAP--UNIT II.		EDUCATIONAL FACILITIES	
ENGINEERING 20, BASIC DRAFTING.		VT 005 593	15
VT 011 487	49	INTRODUCTION TO THE TECHNICAL CORES	
THE ABC'S OF VIEWS OF OBJECTS. MINI		I AND II.	
LAP--UNIT 3. BASIC DRAFTING SURVEY		EDUCATIONAL PLANNING	
CLASS.		VT 006 430	20
VT 011 488	49	THE NEW MEXICO STATE PLANNING GUIDE	
MULTI-VIEW DRAWINGS, LAP--UNIT IV.		FOR INDUSTRIAL ARTS.	
ENGINEERING 20, BASIC DRAFTING.		EDUCATIONAL RESEARCH	
VT 011 489	49	VT 011 998 ED 047 088	53
INTRODUCTION TO APPLIED DRAWING.		BIBLIOGRAPHY OF INDUSTRIAL ARTS	
BASIC DRAFTING SURVEY CLASS, UNIT		EDUCATION DOCUMENTS.	
5.			
VT 011 490	50		
ADVANCED MULTI-VIEW DRAWINGS,			
LAP--UNIT VI. ENGINEERING 20, BASIC			
DRAFTING.			

IND ARTS

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
EDUCATIONAL RESOURCES		VT 012 370	53
VT 001 858	7	MECHANICAL AND ELECTRICAL	
CAREER EDUCATION RESOURCE GUIDE.		TECHNOLOGY. RESOURCE GUIDE FOR	
ELECTRICAL OCCUPATIONS		EFFECTIVE INSTRUCTION IN INDUSTRIAL	
VT 006 262	19	ARTS.	
ELECTRICITY I.		ELECTRONIC WOOD WELDING	
ELECTRICIANS		VT 009 316	42
VT 005 650	16	USING THE ELECTRONIC WOOD WELDER.	
STATE CURRICULUM GUIDE FOR		ELECTRONICS	
INDUSTRIAL ARTS AND VOCATIONAL		VT 000 398	3
ELECTRICITY-ELECTRONICS.		INDUSTRIAL ARTS CURRICULUM GUIDE	
ELECTRICITY		FOR ELECTRICITY IN OHIO SCHOOLS.	
VT 000 398	3	VT 000 978	5
INDUSTRIAL ARTS CURRICULUM GUIDE		INDUSTRIAL ARTS	
FOR ELECTRICITY IN OHIO SCHOOLS.		ELECTRICITY--ELECTRONICS, GRADES	
VT 000 978	5	7-12.	
INDUSTRIAL ARTS		VT 001 686	7
ELECTRICITY--ELECTRONICS, GRADES		INDUSTRIAL ARTS	
7-12.		ELECTRICITY-ELECTRONICS, GRADES	
VT 001 686	7	7-12. COURSE GUIDE.	
INDUSTRIAL ARTS		VT 005 650	16
ELECTRICITY-ELECTRONICS, GRADES		STATE CURRICULUM GUIDE FOR	
7-12. COURSE GUIDE.		INDUSTRIAL ARTS AND VOCATIONAL	
VT 002 032	9	ELECTRICITY-ELECTRONICS.	
APPLIED ELECTRICITY. (INDUSTRIAL		VT 007 685 ED 028 259	28
ARTS SERIES).		ARIZONA INDUSTRIAL ARTS:	
VT 005 650	16	ELECTRICITY ELECTRONICS. A	
STATE CURRICULUM GUIDE FOR		CURRICULUM GUIDE	
INDUSTRIAL ARTS AND VOCATIONAL		VT 007 689	28
ELECTRICITY-ELECTRONICS.		INDUSTRIAL ARTS;	
VT 006 262	19	ELECTRICITY-ELECTRONICS.	
ELECTRICITY I.		VT 010 613	46
VT 006 998	24	FUNDAMENTALS OF ELECTRICITY AND	
BASIC ELECTRICITY; STUDENT		ELECTRONICS.	
WORKBOOK, INSTRUCTORS GUIDE AND		VT 012 367	53
TESTS.		ELECTRICITY--ELECTRONICS;	
VT 007 363	26	CURRICULUM GUIDE FOR AN	
TEACHING AIDS IN ELECTRICITY.		INTRODUCTORY COURSE.	
VT 007 685 ED 028 259	28	ELEMENTARY GRADES	
ARIZONA INDUSTRIAL ARTS:		VT 000 847	4
ELECTRICITY ELECTRONICS. A		A GUIDE FOR INDUSTRIAL ARTS IN OHIO	
CURRICULUM GUIDE		SCHOOLS, SECOND EDITION.	
VT 007 689	28	VT 007 308	26
INDUSTRIAL ARTS;		EQUIPMENT, TOOLS AND MATERIALS, AS	
ELECTRICITY-ELECTRONICS.		PROPOSED BY THE TECHNOLOGY FOR	
VT 008 251	34	CHILDREN PROJECT.	
SUGGESTED RELATED INFORMATION FOR		VT 007 388	27
THE ELECTRICITY AREA. INDUSTRIAL		TECHNOLOGY FOR CHILDREN PROJECT.	
ARTS COMPREHENSIVE GENERAL SHOP		RECOMMENDED PROCEDURES FOR SAFETY	
COURSE.		AND USE OF HAND TOOLS IN THE	
VT 008 256	35	ELEMENTARY CLASSROOM.	
ELECTRICITY PROJECT IDEAS FOR		VT 007 850 ED 028 266	30
INDUSTRIAL ARTS.		GUIDES IN CONSTRUCTION AND	
VT 010 276	44	MANUFACTURING FOR ELEMENTARY SCHOOL	
BASIC ELECTRICITY, THEORY AND		INDUSTRIAL ARTS. K-2; 3-4; 5-6.	
PRACTICE.		VT 008 407	37
VT 010 613	46	ELEMENTARY SCHOOL INDUSTRIAL ARTS.	
FUNDAMENTALS OF ELECTRICITY AND		ELEMENTARY SCHOOL CURRICULUM	
ELECTRONICS.		VT 007 459 ED 024 822	28
VT 012 367	53	THE DEVELOPMENT OF A COURSE OF	
ELECTRICITY--ELECTRONICS;		STUDY FOR INDUSTRIAL ARTS EDUCATION	
CURRICULUM GUIDE FOR AN		AT THE ELEMENTARY SCHOOL LEVEL.	
INTRODUCTORY COURSE.		VT 008 407	37
		ELEMENTARY SCHOOL INDUSTRIAL ARTS.	

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
ELEMENTARY SECONDARY EDUCATION ACT TITLE III		VT 011 490	50
VT 011 485	49	ADVANCED MULTI-VIEW DRAWINGS, LAP--UNIT VI. ENGINEERING 20, BASIC DRAFTING.	
LETTERING, LAP--UNIT I. ENGINEERING 20, BASIC DRAFTING.		VT 011 492	50
VT 011 486	49	SECTIONAL VIEWS, LAP--UNIT VIII. ENGINEERING 20, BASIC DRAFTING.	
INSTRUMENT TECHNIQUE, LAP--UNIT II. ENGINEERING 20, BASIC DRAFTING.		VT 011 494	50
VT 011 487	49	WORKING DRAWINGS, LAP--UNIT X. ENGINEERING 20, BASIC DRAFTING.	
THE ABC'S OF VIEWS OF OBJECTS. MINI LAP--UNIT 3. BASIC DRAFTING SURVEY CLASS.		VT 011 507	52
VT 011 488	49	PICTORIAL DRAWINGS. DRAFTING--LANGUAGE OF INDUSTRY. LAP NO. 8, BASIC DRAFTING.	
MULTI-VIEW DRAWINGS, LAP--UNIT IV. ENGINEERING 20, BASIC DRAFTING.		ENGINEERING GRAPHICS	
VT 011 489	49	VT 011 485	49
INTRODUCTION TO APPLIED DRAWING. BASIC DRAFTING SURVEY CLASS, UNIT 5.		LETTERING, LAP--UNIT I. ENGINEERING 20, BASIC DRAFTING.	
VT 011 490	50	VT 011 486	49
ADVANCED MULTI-VIEW DRAWINGS, LAP--UNIT VI. ENGINEERING 20, BASIC DRAFTING.		INSTRUMENT TECHNIQUE, LAP--UNIT II. ENGINEERING 20, BASIC DRAFTING.	
VT 011 491	50	VT 011 491	50
AUXILIARY VIEWS, LAP--UNIT VII. ENGINEERING 20, BASIC DRAFTING.		AUXILIARY VIEWS, LAP--UNIT VII. ENGINEERING 20, BASIC DRAFTING.	
VT 011 492	50	VT 011 493	50
SECTIONAL VIEWS, LAP--UNIT VIII. ENGINEERING 20, BASIC DRAFTING.		DIMENSIONING LAP--UNIT IX. ENGINEERING 20, BASIC DRAFTING.	
VT 011 493	50	ENGINES	
DIMENSIONING LAP--UNIT IX. ENGINEERING 20, BASIC DRAFTING.		VT 000 531	3
VT 011 494	50	POWER.	
WORKING DRAWINGS, LAP--UNIT X. ENGINEERING 20, BASIC DRAFTING.		VT 008 156	34
VT 011 495	50	INDUSTRIAL ARTS; POWER MECHANICS AND SMALL ENGINES.	
SAFETY, YOUR CONCERN AND MINE. LEARNING ACTIVITY PACKAGE, SAFETY IN THE WOOD SHOP.		EQUIPMENT UTILIZATION	
VT 011 496	51	VT 002 345	9
COMPONENTS OF THE AUTOMOBILE.		INDUSTRIAL ARTS SAFETY INSTRUCTION.	
VT 011 497	51	EXPANDABLE POLYSTYRENE BEADS	
SAFETY IN THE AUTO SHOP.		VT 006 976	22
VT 011 498	51	PERFORMANCE PRE-TEST FOR STUDENTS USING THE EXPANDABLE POLYSTYRENE PLASTICS UNIT.	
GEOMETRY OF DRAWING, DRAFTING.		VT 006 977	22
VT 011 507	52	KNOWLEDGE PRE-TEST; CONSTRUCTING EXPANDABLE POLYSTYRENE PLASTIC ICE BUCKET.	
PICTORIAL DRAWINGS. DRAFTING--LANGUAGE OF INDUSTRY. LAP NO. 8, BASIC DRAFTING.		VT 006 978	22
VT 011 549	52	PERFORMANCE CHECKLIST NO. 1; THE PRE-EXPANSION OF EXPANDABLE POLYSTYRENE BEADS.	
IDENTIFICATION, CARE, AND USES OF HAND TOOLS.		VT 006 979	22
VT 011 550	52	EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 1, PRE-EXPANSION OF EXPANDABLE POLYSTYRENE BEADS.	
FIND YOUR WAY. LEARNING ACTIVITY PACKAGE, "PRE-LAP".		VT 006 980	22
ENGINEERING		EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 2, PREPARATION AND ASSEMBLY OF MOLD.	
VT 005 279	15	VT 006 981	23
THE PRE-TECHNICAL PROJECT.		EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 3, MOLDING THE PRE-EXPANDED POLYSTYRENE BEADS.	
ENGINEERING DRAWING		VT 006 984	23
VT 011 488	49	EXPANDABLE POLYSTYRENE PLASTICS; TEACHER'S GUIDE.	
MULTI-VIEW DRAWINGS, LAP--UNIT IV. ENGINEERING 20, BASIC DRAFTING.			
VT 011 489	49		
INTRODUCTION TO APPLIED DRAWING. BASIC DRAFTING SURVEY CLASS, UNIT 5.			

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT 006 983	23	FLUID POWER	
EXPANDABLE POLYSTYRENE PLASTICS;		VT 007 384	27
STUDENT GUIDE.		FLUID POWER IN PLANT AND FIELD.	
EXPERIENCED TEACHER FELLOWSHIP		VOLUME 1.	
PROGRAM		VT 007 439	27
VT 011 399 ED 040 303	48	INDUSTRIAL FLUID POWER. VOLUME 1.	
INDIVIDUALIZED MATERIAL FOR		VT 007 440	27
INDUSTRIAL EDUCATION BASED ON THE		INDUSTRIAL FLUID POWER. VOLUME 2.	
AVA BOOKLET "A GUIDE TO IMPROVING		VT 007 441	27
INSTRUCTION IN INDUSTRIAL ARTS".		INDUSTRIAL FLUID POWER. VOLUME 3.	
EXPERIMENTAL CURRICULUM		FLUID POWER EDUCATION	
VT 006 998	24	VT 007 384	27
BASIC ELECTRICITY; STUDENT		FLUID POWER IN PLANT AND FIELD.	
WORKBOOK, INSTRUCTORS GUIDE AND		VOLUME 1.	
TESTS.		VT 008 184 ED 033 193	34
VT 008 004	32	COURSE OUTLINE AND RESOURCE	
A STUDY OF MANUFACTURING		MATERIALS FOR FLUID POWER	
INDUSTRIES. AN EXPERIMENTAL COURSE		INSTRUCTION IN SECONDARY SCHOOLS,	
AT THE JUNIOR HIGH SCHOOL LEVEL		PREPARED AT THE NDEA SUMMER	
COMBINING STUDENTS OF GRADES SEVEN,		INSTITUTE 1968.	
EIGHT, AND NINE.		VT 012 370	53
VT 012 759	55	MECHANICAL AND ELECTRICAL	
INDUSTRIAL ARTS AEROSPACE FOR		TECHNOLOGY. RESOURCE GUIDE FOR	
INTERMEDIATE AND JUNIOR HIGH		EFFECTIVE INSTRUCTION IN INDUSTRIAL	
SCHOOLS. EXPERIMENTAL MATERIALS,		ARTS.	
FIRST DRAFT.		GRADE 7	
EXPERIMENTAL PROGRAMS		VT 011 086	47
VT 002 860	10	INDUSTRIAL ARTS.	
AMERICAN INDUSTRY TECHNICAL REPORT,		GRADE 8	
1965-66.		VT 011 086	47
VT 003 035	11	INDUSTRIAL ARTS.	
INDUSTRIAL ARTS IN GENERAL		GRAPHIC ARTS	
EDUCATION.		VT 000 467	3
FIELD CHECK		GRAPHIC ARTS.	
VT 011 074	47	VT 005 914	16
INDUSTRIAL ARTS SAFETY CHECKLIST.		INSTRUCTOR'S GUIDE FOR PRINTING 1	
FILMS		AND 2.	
VT 001 858	7	VT 006 765	21
CAREER EDUCATION RESOURCE GUIDE.		GRAPHIC ARTS 1 AND 2. COURSE OF	
VT 011 748	52	STUDY.	
FUNCTIONS OF INDUSTRY.		VT 007 864	32
FILMSTRIPS		INDUSTRIAL ARTS GRAPHIC	
VT 001 858	7	COMMUNICATIONS 10, 20, 30.	
CAREER EDUCATION RESOURCE GUIDE.		VT 008 072	33
VT 009 306	41	INDUSTRIAL ARTS; GRAPHIC ARTS.	
APPLIED DESIGN.		VT 012 372	54
VT 009 316	42	VISUAL COMMUNICATION TECHNOLOGY.	
USING THE ELECTRONIC WOOD WELDER.		RESOURCE GUIDE FOR EFFECTIVE	
FIRE CHEMISTRY		INSTRUCTION IN INDUSTRIAL ARTS.	
VT 010 644	46	GUIDELINES	
FIRE CHEMISTRY.		VT 002 504	9
FIRE SCIENCE EDUCATION		ADMINISTRATIVE GUIDELINES FOR	
VT 010 644	46	INDUSTRIAL EDUCATION, GRADES 7-12.	
FIRE CHEMISTRY.		VT 007 388	27
FLORIDA		TECHNOLOGY FOR CHILDREN PROJECT.	
VT 008 407	37	RECOMMENDED PROCEDURES FOR SAFETY	
ELEMENTARY SCHOOL INDUSTRIAL ARTS.		AND USE OF HAND TOOLS IN THE	
		ELEMENTARY CLASSROOM.	
		VT 011 502	51
		DIMENSIONING RULES AND PRINCIPLES.	
		LAP NO. 11.	
		VT 012 368	53
		INDUSTRIAL ARTS PROGRAMING FOR	
		JUNIOR AND SENIOR HIGH SCHOOLS.	

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
HAND TOOLS		VT 000 467	3
VT 000 306	2	GRAPHIC ARTS.	
INFORMATION ON HAND TOOLS FOR		VT 000 506	3
METALWORKING TRADES.		INDUSTRIAL ARTS COURSE OUTLINES,	
VT 007 388	27	GRADES SEVEN, EIGHT, AND NINE.	
TECHNOLOGY FOR CHILDREN PROJECT.		VT 000 508	3
RECOMMENDED PROCEDURES FOR SAFETY		INDUSTRIAL ARTS PROGRAMING FOR THE	
AND USE OF HAND TOOLS IN THE		HIGH SCHOOL. (BULLETIN, NO. 2148).	
ELEMENTARY CLASSROOM.		VT 000 531	3
VT 007 807	29	POWER.	
HOW TO USE TAPS, DIES AND HIGH		VT 000 549	4
SPEED STEEL DRILLS.		INDUSTRIAL ARTS AND VOCATIONAL	
VT 011 549	52	EDUCATION, SAFETY MANUAL.	
IDENTIFICATION, CARE, AND USES OF		VT 000 847	4
HAND TOOLS.		A GUIDE FOR INDUSTRIAL ARTS IN OHIO	
HANDICRAFTS		SCHOOLS, SECOND EDITION.	
VT 006 244	19	VT 000 887	4
INDUSTRIAL ARTS CURRICULUM GUIDE		THE PROGRAM OF INDUSTRIAL ARTS	
FOR INDUSTRIAL CRAFTS IN OHIO		EDUCATION IN KENTUCKY. EDUCATIONAL	
SCHOOLS.		BULLETIN, V. 31, NO. 8.	
VT 007 779	29	VT 000 898	4
BEGINNING LEATHERCRAFT PROJECTS FOR		INDUSTRIAL ARTS CURRICULUM GUIDE	
THE INDUSTRIAL ARTS.		FOR SEVENTH AND EIGHTH GRADES.	
VT 007 780	29	VT 000 969	5
INTERMEDIATE LEATHERCRAFT PROJECTS		PRINCIPLES AND PRACTICES OF TRADE	
FOR THE INDUSTRIAL ARTS.		AND INDUSTRIAL TEACHING	
HIGH SCHOOL CURRICULUM		VT 000 978	5
VT 009 072 ED 031 594	40	INDUSTRIAL ARTS	
DEVELOPING AMERICAN INDUSTRY		ELECTRICITY--ELECTRONICS, GRADES	
COURSES FOR THE SECONDARY SCHOOL.		7-12.	
HIGH SCHOOLS		VT 000 979	5
VT 005 650	16	WOODWORKING, GRADES 7-12; A	
STATE CURRICULUM GUIDE FOR		TENTATIVE BULLETIN.	
INDUSTRIAL ARTS AND VOCATIONAL		VT 000 980	5
ELECTRICITY-ELECTRONICS.		DRAFTING, GRADES 7-12.	
HUMANITIES		VT 001 200	6
VT 002 009 ED 022 843	8	INSTRUCTIONAL GUIDE FOR METALS.	
INDUSTRIAL ARTS HUMANITIES MEDIA		VT 001 258	6
GUIDE: CUE.		INDUSTRIAL ARTS WOODWORKING,	
ILLUSTRATORS		SECONDARY SCHOOLS.	
VT 004 806	14	VT 001 359	6
TEACHER GUIDE FOR AIRBRUSH.		INDUSTRIAL ARTS.	
INDIVIDUALIZED PROGRAMS		VT 001 479	6
VT 011 399 ED 040 303	48	INDUSTRIAL EDUCATION IN HAMPTON	
INDIVIDUALIZED MATERIAL FOR		SCHOOL SYSTEM, 1966-1967.	
INDUSTRIAL EDUCATION BASED ON THE		VT 001 686	7
AVA BOOKLET "A GUIDE TO IMPROVING		INDUSTRIAL ARTS	
INSTRUCTION IN INDUSTRIAL ARTS".		ELECTRICITY-ELECTRONICS, GRADES	
INDUSTRIAL ARTS		7-12. COURSE GUIDE.	
VT 000 017 ED 026 449	2	VT 001 858	7
INDUSTRIAL ARTS AND TECHNOLOGY IN		CAREER EDUCATION RESOURCE GUIDE.	
MAINE, A STUDY OF AMERICAN		VT 001 958	7
INDUSTRY. A GUIDE FOR SECONDARY		INDUSTRIAL ARTS CURRICULUM PLANNING	
SCHOOLS IN MAINE.		GUIDE, GRADES 7-12.	
VT 000 239	2	VT 002 002 ED 021 962	7
INDUSTRIAL ARTS SUPPLEMENT.		CERAMICS, PROJECT IDEAS FOR	
VT 000 333	2	INDUSTRIAL ARTS.	
GUIDELINES FOR INDUSTRIAL ARTS		VT 002 004	8
INSTRUCTION.		AN EXPERIMENTAL RESOURCE UNIT IN	
VT 000 398	3	PLASTICS FOR INDUSTRIAL ARTS.	
INDUSTRIAL ARTS CURRICULUM GUIDE		VT 002 009 ED 022 843	8
FOR ELECTRICITY IN OHIO SCHOOLS.		INDUSTRIAL ARTS HUMANITIES MEDIA	
		GUIDE: CUE.	
		VT 002 112	8
		A GUIDE FOR TEACHING POWER	
		MECHANICS IN INDUSTRIAL ARTS IN	
		INDIANA.	

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT 002 506	9	VT 005 650	16
NEBRASKA INDUSTRIAL EDUCATION		STATE CURRICULUM GUIDE FOR	
CURRICULUM GUIDE, GRADES 7-12.		INDUSTRIAL ARTS AND VOCATIONAL	
VT 002 559 ED 032 381	10	ELECTRICITY-ELECTRONICS.	
SCIENTIFIC AND ENGINEERING		VT 005 915	16
INFLUENCES ON INDUSTRIAL ARTS. A		INSTRUCTOR'S GUIDE FOR SENIOR HIGH	
SUMMARY OF INSTITUTE ACTIVITIES		SCHOOL WOODWORK IN THE TULSA PUBLIC	
(NDEA SUMMER INST., COLLEGE		SCHOOLS (TENTATIVE).	
STATION, TEX.).		VT 005 963	17
VT 002 650	10	PLASTIC PROJECTS. FIRST SEMESTER.	
GUIDE LINES FOR THE JUNIOR HIGH		VT 005 964	17
SCHOOL INDUSTRIAL ARTS PROGRAM.		INTERMEDIATE PLASTIC PROJECTS.	
VT 002 778 ED 022 849	10	VT 006 155 ED 041 099	17
INDUSTRIAL ARTS; A GUIDE FOR		ELEMENTARY SCHOOL INDUSTRIAL	
COLORADO SCHOOLS.		ARTS--SELECTED READINGS AND	
VT 002 860	10	RESOURCES.	
AMERICAN INDUSTRY TECHNICAL REPORT,		VT 006 235	17
1965-66.		BASIC AUTOMOBILE MECHANICS, CENTRAL	
VT 003 035	11	HIGH SCHOOL, GRADES 9 AND 10.	
INDUSTRIAL ARTS IN GENERAL		VT 006 236	18
EDUCATION.		DRAFTING STANDARDS MANUAL.	
VT 003 271	11	VT 006 244	18
INDUSTRIAL ARTS CURRICULUM PLANNING		INDUSTRIAL ARTS CURRICULUM GUIDE	
GUIDE, GRADES 7-12.		FOR INDUSTRIAL CRAFTS IN OHIO	
VT 003 286	11	SCHOOLS.	
RELATED INFORMATION FOR THE STUDY		VT 006 246	18
OF FERROUS INDUSTRY.		INDUSTRIAL ARTS CURRICULUM GUIDE	
VT 003 713	12	FOR DRAFTING.	
STATE ADOPTED TEXTBOOKS FOR		VT 006 247	18
INDUSTRIAL ARTS IN INDIANA.		INDUSTRIAL ARTS CURRICULUM GUIDE	
VT 003 977	12	FOR METALS.	
JUNIOR HIGH SCHOOL METALS, A		VT 006 248	18
CURRICULUM GUIDE.		INDUSTRIAL ARTS CURRICULUM GUIDE	
VT 003 978	12	FOR WOODWORKING.	
WOOD AND PLASTIC, A GUIDE FOR		VT 006 249	19
GRADES 10-11-12.		INDUSTRIAL ARTS CURRICULUM GUIDE	
VT 004 343	12	FOR POWER MECHANICS.	
INDUSTRIAL ARTS METALWORKING.		VT 006 260	19
VT 004 592 ED 020 349	13	DRAFTING I.	
NDEA TITLE XI INSTITUTE FOR		VT 006 262	19
ADVANCED STUDY IN INDUSTRIAL ARTS		ELECTRICITY I.	
(SAN JOSE STATE COLLEGE, JUNE		VT 006 323	20
19-JULY 28, 1967). FINAL TECHNICAL		INDUSTRIAL ARTS INSTRUCTIONAL GUIDE	
REPORT.		FOR GRADES K-6. ELEMENTARY SCHOOL	
VT 004 596	13	PRACTICAL ARTS.	
HANDBOOK FOR INSTRUCTORS OF		VT 006 430	20
INDUSTRIAL ARTS AND VOCATIONAL		THE NEW MEXICO STATE PLANNING GUIDE	
EDUCATION.		FOR INDUSTRIAL ARTS.	
VT 004 636	13	VT 006 452	20
EXPERIMENTS AND INSTRUCTIONAL UNITS		INDUSTRIAL ARTS GRADES 7-8.	
FOR INDUSTRIAL MATERIALS AS AN		(TENTATIVE).	
INTEGRATED PART OF THE INDUSTRIAL		VT 006 462	20
ARTS,		INDUSTRIAL ARTS TEACHERS' HANDBOOK.	
VT 004 806	14	VT 006 597	20
TEACHER GUIDE FOR AIRBRUSH.		INDUSTRIAL ARTS, DRAFTING I.	
VT 004 851	14	TEACHER'S GUIDE.	
GENERAL INDUSTRIAL ARTS		VT 006 598	21
(MANUFACTURING),		DRAFTING I. STUDENT PROBLEMS.	
VT 005 128	14	VT 006 650	21
REVISED APPROVED BOOK LIST,		GENERAL METAL WORK 1 AND 2. COURSE	
INDUSTRIAL ARTS, GRADES K-12.		OF STUDY.	
VT 005 164	14	VT 006 661	21
EARLY SECONDARY INDUSTRIAL ARTS.		AN INSTRUCTIONAL GUIDE FOR	
VT 005 595 ED 020 429	15	INDUSTRIAL WOODWORKING.	
STRUCTURE AND CONTENT FOUNDATIONS		VT 006 765	21
FOR CURRICULUM DEVELOPMENT.		GRAPHIC ARTS 1 AND 2. COURSE OF	
		STUDY.	

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT 006 976	22	VT 007 689	28
PERFORMANCE PRE-TEST FOR STUDENTS USING THE EXPANDABLE POLYSTYRENE PLASTICS UNIT.		INDUSTRIAL ARTS; ELECTRICITY-ELECTRONICS.	
VT 006 977	22	VT 007 730	29
KNOWLEDGE PRE-TEST; CONSTRUCTING EXPANDABLE POLYSTYRENE PLASTIC ICE BUCKET.		INDUSTRIAL ARTS; A STUDY OF INDUSTRIAL TECHNOLOGY. INTERIM BULLETIN.	
VT 006 978	22	VT 007 779	29
PERFORMANCE CHECKLIST NO. 1; THE PRE-EXPANSION OF EXPANDABLE POLYSTYRENE BEADS.		BEGINNING LEATHERCRAFT PROJECTS FOR THE INDUSTRIAL ARTS.	
VT 006 979	22	VT 007 780	29
EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 1, PRE-EXPANSION OF EXPANDABLE POLYSTYRENE BEADS.		INTERMEDIATE LEATHERCRAFT PROJECTS FOR THE INDUSTRIAL ARTS.	
VT 006 980	22	VT 007 807	29
EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 2, PREPARATION AND ASSEMBLY OF MOLD.		HOW TO USE TAPS, DIES AND HIGH SPEED STEEL DRILLS.	
VT 006 981	23	VT 007 844 ED 031 554	29
EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 3, MOLDING THE PRE-EXPANDED POLYSTYRENE BEADS.		UNITS FOR THE LABORATORY OF INDUSTRIES.	
VT 006 982	23	VT 007 850 ED 028 266	30
EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 4, REMOVING THE FOAMED PIECE.		GUIDES IN CONSTRUCTION AND MANUFACTURING FOR ELEMENTARY SCHOOL INDUSTRIAL ARTS. K-2; 3-4; 5-6.	
VT 006 983	23	VT 007 853 ED 031 555	30
EXPANDABLE POLYSTYRENE PLASTICS; STUDENT GUIDE.		WOODWORKING TECHNOLOGY.	
VT 006 984	23	VT 007 857 ED 031 556	30
EXPANDABLE POLYSTYRENE PLASTICS; TEACHER'S GUIDE.		LAMINATING AND BENDING; A BASE SYLLABUS ON WOOD TECHNOLOGY.	
VT 007 001	25	VT 007 858 ED 031 557	31
OXY-ACETYLENE WELDING SERIES; INSTRUCTION BOOK 2.		ADHESIVES; A BASE SYLLABUS ON WOOD TECHNOLOGY.	
VT 007 002	25	VT 007 859 ED 031 558	31
OXY-ACETYLENE WELDING SERIES; INSTRUCTION BOOK 1.		LUMBER AND RELATED PRODUCTS; A BASE SYLLABUS ON WOOD TECHNOLOGY.	
VT 007 263	25	VT 007 860 ED 031 559	31
INDUSTRIAL ARTS IN THE JUNIOR HIGH SCHOOL.		WOOD SUBSTITUTES; A BASE SYLLABUS ON WOOD TECHNOLOGY.	
VT 007 308	26	VT 007 861 ED 031 560	31
EQUIPMENT, TOOLS AND MATERIALS, AS PROPOSED BY THE TECHNOLOGY FOR CHILDREN PROJECT.		WOOD PROPERTIES AND KINDS; A BASE SYLLABUS ON WOOD TECHNOLOGY.	
VT 007 334	26	VT 007 864	32
FABRICATION TECHNIQUES FOR TURBINE COMPONENTS.		INDUSTRIAL ARTS GRAPHIC COMMUNICATIONS 10, 20, 30.	
VT 007 388	27	VT 007 934	32
TECHNOLOGY FOR CHILDREN PROJECT. RECOMMENDED PROCEDURES FOR SAFETY AND USE OF HAND TOOLS IN THE ELEMENTARY CLASSROOM.		JUNIOR HIGH SCHOOL CURRICULUM GUIDE FOR INDUSTRIAL ARTS.	
VT 007 459 ED 024 822	28	VT 007 972	32
THE DEVELOPMENT OF A COURSE OF STUDY FOR INDUSTRIAL ARTS EDUCATION AT THE ELEMENTARY SCHOOL LEVEL.		DESIGN FOR WELDING. SOME PRACTICAL CONSIDERATIONS IN DESIGNING STEEL WELMENTS.	
VT 007 464	28	VT 008 004	32
INDUSTRIAL ARTS ENRICHMENT EXPERIENCES IN THE ELEMENTARY SCHOOL. GRADES FIVE AND SIX.		A STUDY OF MANUFACTURING INDUSTRIES. AN EXPERIMENTAL COURSE AT THE JUNIOR HIGH SCHOOL LEVEL COMBINING STUDENTS OF GRADES SEVEN, EIGHT, AND NINE.	
VT 007 685 ED 028 259	28	VT 008 041	33
ARIZONA INDUSTRIAL ARTS; ELECTRICITY ELECTRONICS. A CURRICULUM GUIDE		INDUSTRIAL ARTS EDUCATION CURRICULUM GUIDE.	
		VT 008 052	33
		INDUSTRIAL ARTS.	
		VT 008 071	33
		INDUSTRIAL ARTS; SAFETY GUIDE.	
		VT 008 072	33
		INDUSTRIAL ARTS; GRAPHIC ARTS.	
		VT 008 156	34
		INDUSTRIAL ARTS; POWER MECHANICS AND SMALL ENGINES.	

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT 008 219	34	VT 009 288	41
COUNTY COURSE OF STUDY: INDUSTRIAL ARTS.		A TECHNICAL DRAWING COURSE FOR COLLEGE-PREPARATORY STUDENTS.	
VT 008 238	34	VT 009 306	41
A GUIDE TO IMPROVEMENT OF INDUSTRIAL ARTS IN OKLAHOMA SCHOOLS GRADES 7-12.		APPLIED DESIGN.	
VT 008 251	34	VT 009 704	42
SUGGESTED RELATED INFORMATION FOR THE ELECTRICITY AREA. INDUSTRIAL ARTS COMPREHENSIVE GENERAL SHOP COURSE.		ARTS AND CRAFTS FOR K TO 6.	
VT 008 253	35	VT 009 779	43
INDUSTRIAL ARTS SYLLABUS IN TRANSPORTATION.		INDUSTRIAL TESTING; INDUSTRIAL ARTS TEACHING GUIDE.	
VT 008 255	35	VT 009 867	43
INDUSTRIAL ARTS EDUCATION.		SAFETY HANDBOOK; A GUIDE FOR INDUSTRIAL ARTS PROGRAMS, AND TRANSPARENCY MASTERS.	
VT 008 256	35	VT 010 290 ED 037 554	44
ELECTRICITY PROJECT IDEAS FOR INDUSTRIAL ARTS.		DEVELOPMENT AND STRUCTURE OF INDUSTRY: INFORMATION AND JOB SHEETS.	
VT 008 259 ED 039 315	35	VT 010 301	44
INSTRUCTIONAL UNITS FOR INDUSTRIAL MATERIALS, VOL. II.		SAFE USE OF HAND AND PORTABLE POWER TOOLS.	
VT 008 268	36	VT 010 313 ED 037 555	45
SAFETY EDUCATION IN THE SCHOOL SHOP.		DEVELOPMENT AND STRUCTURE OF INDUSTRY: TEACHING PLAN AND ACTIVITY PLAN SHEETS.	
VT 008 269 ED 026 273	36	VT 010 314 ED 037 556	45
SPACE RESOURCES FOR THE HIGH SCHOOL. INDUSTRIAL ARTS RESOURCE UNITS.		DEVELOPMENT AND STRUCTURE OF INDUSTRY: STUDY GUIDE.	
VT 008 270	36	VT 010 315 ED 037 557	45
HANDBOOK FOR INDUSTRIAL ARTS EDUCATION.		DEVELOPMENT AND STRUCTURE OF INDUSTRY: INSTRUCTIONAL AIDS LIST AND BIBLIOGRAPHY.	
VT 008 328	36	VT 010 439	45
SUGGESTED RELATED INFORMATION FOR THE METAL AREA. INDUSTRIAL ARTS COMPREHENSIVE GENERAL SHOP COURSE.		JUNIOR HIGH SCHOOL CURRICULUM GUIDE FOR INDUSTRIAL ARTS.	
VT 008 407	37	VT 010 505	46
ELEMENTARY SCHOOL INDUSTRIAL ARTS.		MODERN METALWORKING TECHNOLOGY.	
VT 008 465	38	VT 010 605	46
TWENTY-EIGHT INDUSTRIAL ARTS FILMS FROM MCGRAW-HILL.		METALWORK 1-2.	
VT 008 562 ED 033 195	38	VT 010 613	46
INDUSTRIAL ARTS AND VOCATIONAL EDUCATION IN GRADES K-12. FINAL REPORT.		FUNDAMENTALS OF ELECTRICITY AND ELECTRONICS.	
VT 008 733	39	VT 011 074	47
POWER: PRIME MOVER OF TECHNOLOGY. LABORATORY MANUAL.		INDUSTRIAL ARTS SAFETY CHECKLIST.	
VT 008 734	39	VT 011 086	47
POWER: PRIME MOVER OF TECHNOLOGY. TEACHER'S MANUAL.		INDUSTRIAL ARTS.	
VT 008 796	39	VT 011 087	47
ORGANIZATION AND ADMINISTRATION FORMS FOR INDUSTRIAL ARTS.		INDUSTRIAL ARTS CURRICULUM GUIDE.	
VT 008 872	39	VT 011 295	47
INDUSTRIAL ARTS CURRICULUM GUIDE: INDUSTRIAL ARTS, 1968-1969.		CURRICULUM GUIDE IN METALS, GRADES SEVEN THROUGH TWELVE.	
VT 008 993	40	VT 011 334	48
MCCOWORKING: VOCATIONAL-INDUSTRIAL EDUCATION CURRICULUM GUIDE.		BEGINNING DRAFTING. A HANDBOOK FOR GRADES SEVEN AND EIGHT.	
VT 009 072 ED 031 594	40	VT 011 363	48
DEVELOPING AMERICAN INDUSTRY COURSES FOR THE SECONDARY SCHOOL.		INDUSTRIAL ARTS CURRICULUM GUIDE FOR THE STATE OF WYOMING GRADES K-12.	
VT 009 194	41	VT 011 399 ED 040 303	48
SENIOR HIGH SCHOOL INDUSTRIAL ARTS.		INDIVIDUALIZED MATERIAL FOR INDUSTRIAL EDUCATION BASED ON THE AVA BOOKLET "A GUIDE TO IMPROVING INSTRUCTION IN INDUSTRIAL ARTS".	
VT 009 281	41	VT 011 485	49
INTERPRETING INDUSTRY THROUGH LINE PRODUCTION.		LETTERING, LAP--UNIT I. ENGINEERING 20, BASIC DRAFTING.	
		VT 011 486	49
		INSTRUMENT TECHNIQUE, LAP--UNIT II. ENGINEERING 20, BASIC DRAFTING.	

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT 011 487	49	VT 012 371	54
THE ABC'S OF VIEWS OF OBJECTS. MINI LAP--UNIT 3. BASIC DRAFTING SURVEY CLASS.		MATERIALS TECHNOLOGY. RESOURCE GUIDE FOR EFFECTIVE INSTRUCTION IN INDUSTRIAL ARTS.	
VT 011 488	49	VT 012 372	54
MULTI-VIEW DRAWINGS, LAP--UNIT IV. ENGINEERING 20, BASIC DRAFTING.		VISUAL COMMUNICATION TECHNOLOGY. RESOURCE GUIDE FOR EFFECTIVE INSTRUCTION IN INDUSTRIAL ARTS.	
VT 011 489	49	VT 012 741	54
INTRODUCTION TO APPLIED DRAWING. BASIC DRAFTING SURVEY CLASS, UNIT 5.		WOODWORK 1-2.	
VT 011 490	50	VT 012 752	54
ADVANCED MULTI-VIEW DRAWINGS, LAP--UNIT VI. ENGINEERING 20, BASIC DRAFTING.		MECHANICAL DRAWING 1-4. A GUIDE FOR INDUSTRIAL ARTS TEACHERS.	
VT 011 491	50	VT 012 754	55
AUXILIARY VIEWS, LAP--UNIT VII. ENGINEERING 20, BASIC DRAFTING.		7B WOODWORK.	
VT 011 492	50	VT 012 759	55
SECTIONAL VIEWS, LAP--UNIT VIII. ENGINEERING 20, BASIC DRAFTING.		INDUSTRIAL ARTS AEROSPACE FOR INTERMEDIATE AND JUNIOR HIGH SCHOOLS. EXPERIMENTAL MATERIALS, FIRST DRAFT.	
VT 011 493	50	VT 012 899	55
DIMENSIONING LAP--UNIT IX. ENGINEERING 20, BASIC DRAFTING.		INDUSTRIAL ARTS POWER MECHANICS.	
VT 011 494	50	VT 013 061	55
WORKING DRAWINGS, LAP--UNIT X. ENGINEERING 20, BASIC DRAFTING.		INDUSTRIAL ARTS FOR IOWA SCHOOLS.	
VT 011 495	50	INDUSTRIAL ARTS EDUCATION	
SAFETY, YOUR CONCERN AND MINE. LEARNING ACTIVITY PACKAGE, SAFETY IN THE WOOD SHOP.		VT 002 345	9
VT 011 496	51	INDUSTRIAL ARTS SAFETY INSTRUCTION.	
COMPONENTS OF THE AUTOMOBILE.		INDUSTRIAL ARTS TEACHERS	
VT 011 497	51	VT 002 559 ED 032 381	10
SAFETY IN THE AUTO SHOP.		SCIENTIFIC AND ENGINEERING INFLUENCES ON INDUSTRIAL ARTS. A SUMMARY OF INSTITUTE ACTIVITIES (NDEA SUMMER INST., COLLEGE STATION, TEX.).	
VT 011 498	51	VT 008 270	36
GEOMETRY OF DRAWING, DRAFTING.		HANDBOOK FOR INDUSTRIAL ARTS EDUCATION.	
VT 011 507	52	VT 008 328	36
PICTORIAL DRAWINGS. DRAFTING--LANGUAGE OF INDUSTRY. LAP NO. 8, BASIC DRAFTING.		SUGGESTED RELATED INFORMATION FOR THE METAL AREA. INDUSTRIAL ARTS COMPREHENSIVE GENERAL SHOP COURSE.	
VT 011 549	52	VT 008 664	38
IDENTIFICATION, CARE, AND USES OF HAND TOOLS.		A GUIDE TO BETTER TEACHING.	
VT 011 550	52	VT 012 370	53
FIND YOUR WAY. LEARNING ACTIVITY PACKAGE, "PRE-LAP".		MECHANICAL AND ELECTRICAL TECHNOLOGY. RESOURCE GUIDE FOR EFFECTIVE INSTRUCTION IN INDUSTRIAL ARTS.	
VT 011 748	52	VT 012 371	54
FUNCTIONS OF INDUSTRY.		MATERIALS TECHNOLOGY. RESOURCE GUIDE FOR EFFECTIVE INSTRUCTION IN INDUSTRIAL ARTS.	
VT 011 775	52	VT 012 372	54
SAFETY IN INDUSTRIAL ARTS LABORATORIES.		VISUAL COMMUNICATION TECHNOLOGY. RESOURCE GUIDE FOR EFFECTIVE INSTRUCTION IN INDUSTRIAL ARTS.	
VT 011 998 ED 047 088	53	INDUSTRIAL EDUCATION	
BIBLIOGRAPHY OF INDUSTRIAL ARTS EDUCATION DOCUMENTS.		VT 001 479	6
VT 012 367	53	INDUSTRIAL EDUCATION IN HAMPTON SCHOOL SYSTEM, 1966-1967.	
ELECTRICITY--ELECTRONICS; CURRICULUM GUIDE FOR AN INTRODUCTORY COURSE.		VT 002 504	9
VT 012 368	53	ADMINISTRATIVE GUIDELINES FOR INDUSTRIAL EDUCATION, GRADES 7-12.	
INDUSTRIAL ARTS PROGRAMING FOR JUNIOR AND SENIOR HIGH SCHOOLS.		VT 005 593	15
VT 012 370	53	INTRODUCTION TO THE TECHNICAL CORES I AND II.	
MECHANICAL AND ELECTRICAL TECHNOLOGY. RESOURCE GUIDE FOR EFFECTIVE INSTRUCTION IN INDUSTRIAL ARTS.			

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT 005 914	16	VT 010 315	45
INSTRUCTOR'S GUIDE FOR PRINTING 1 AND 2.		FD 037 557	
VT 006 985	24	DEVELOPMENT AND STRUCTURE OF	
ELECTRIC ARC WELDING; KNOWLEDGE		INDUSTRY: INSTRUCTIONAL AIDS LIST	
PRE-TEST.		AND BIBLIOGRAPHY.	
VT 006 989	24	INDUSTRY	
ELECTRIC ARC WELDING; INSTRUCTION		VT 009 281	41
BOOK II.		INTERPRETING INDUSTRY THROUGH LINE	
VT 006 992	24	PRODUCTION.	
ELECTRIC ARC WELDING; INSTRUCTOR'S		VI 011 748	52
GUIDE.		FUNCTIONS OF INDUSTRY.	
VT 006 998	24	INSERVICE TEACHER EDUCATION	
BASIC ELECTRICITY; STUDENT		VT 002 559	10
WORKBOOK, INSTRUCTORS GUIDE AND		ED 032 381	
TESTS.		SCIENTIFIC AND ENGINEERING	
VT 007 011	25	INFLUENCES ON INDUSTRIAL ARTS. A	
ELECTRIC ARC WELDING; STUDENT		SUMMARY OF INSTITUTE ACTIVITIES	
PERFORMANCE PRE-TEST.		(NDEA SUMMER INST., COLLEGE	
VT 007 360	26	STATION, TEX.).	
ELECTRIC ARC WELDING. INSTRUCTION		INSPECTION	
BOOK.		VT 011 074	47
VT 007 439	27	INDUSTRIAL ARTS SAFETY CHECKLIST.	
INDUSTRIAL FLUID POWER. VOLUME 1.		INSTITUTES (TRAINING PROGRAMS)	
VT 007 440	27	VT 004 592	13
INDUSTRIAL FLUID POWER. VOLUME 2.		ED 020 349	
VT 007 441	27	NDEA TITLE XI INSTITUTE FOR	
INDUSTRIAL FLUID POWER. VOLUME 3.		ADVANCED STUDY IN INDUSTRIAL ARTS	
VT 009 081	40	(SAN JOSE STATE COLLEGE, JUNE	
A SUGGESTED GUIDE FOR TEACHING SLOW		19-JULY 28, 1967). FINAL TECHNICAL	
LEARNERS IN INDUSTRIAL ARTS IN THE		REPORT.	
PUBLIC SCHOOLS.		INSTRUCTIONAL AIDS	
VT 009 316	42	VT 006 249	19
USING THE ELECTRONIC WOOD WELDER.		INDUSTRIAL ARTS CURRICULUM GUIDE	
VT 009 674	42	FOR POWER MECHANICS.	
POWER MECHANICS.		VT 008 184	34
VT 009 706	43	ED 033 193	
METALWORKING; VOCATIONAL-INDUSTRIAL		COURSE OUTLINE AND RESOURCE	
EDUCATION CURRICULUM GUIDE.		MATERIALS FOR FLUID POWER	
CURRICULUM BULLETIN SERIES.		INSTRUCTION IN SECONDARY SCHOOLS,	
VT 009 899	43	PREPARED AT THE NDEA SUMMER	
A TENTATIVE GUIDE FOR IMPLEMENTING		INSTITUTE 1968.	
INDUSTRIAL ARTS EDUCATION.		VT 010 315	45
CURRICULUM GUIDE 1.		ED 037 557	
VT 010 301	44	DEVELOPMENT AND STRUCTURE OF	
SAFE USE OF HAND AND PORTABLE POWER		INDUSTRY: INSTRUCTIONAL AIDS LIST	
TOOLS.		AND BIBLIOGRAPHY.	
VT 010 644	46	INSTRUCTIONAL FILMS	
FIRE CHEMISTRY.		VT 004 684	13
INDUSTRIAL TESTING		REFERENCE AND AUDIO-VISUAL	
VT 009 779	43	MATERIALS ON IRON AND STEEL. A	
INDUSTRIAL TESTING; INDUSTRIAL ARTS		TEACHER'S GUIDE.	
TEACHING GUIDE.		VT 008 465	38
INDUSTRIOLOGY PROJECT		TWENTY-EIGHT INDUSTRIAL ARTS FILMS	
VT 010 290	44	FROM MCGRAW-HILL.	
ED 037 554		INSTRUCTIONAL MATERIALS	
DEVELOPMENT AND STRUCTURE OF		VT 002 860	10
INDUSTRY: INFORMATION AND JOB		AMERICAN INDUSTRY TECHNICAL REPORT,	
SHEETS.		1965-66.	
VT 010 313	45	VT 004 592	13
ED 037 555		ED 020 349	
DEVELOPMENT AND STRUCTURE OF		NDEA TITLE XI INSTITUTE FOR	
INDUSTRY: TEACHING PLAN AND		ADVANCED STUDY IN INDUSTRIAL ARTS	
ACTIVITY PLAN SHEETS.		(SAN JOSE STATE COLLEGE, JUNE	
VT 010 314	45	19-JULY 28, 1967). FINAL TECHNICAL	
ED 037 556		REPORT.	
DEVELOPMENT AND STRUCTURE OF			
INDUSTRY: STUDY GUIDE.			

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT 004 684	13	KINETICS	
REFERENCE AND AUDIO-VISUAL		VT 007 384	27
MATERIALS ON IRON AND STEEL. A		FLUID POWER IN PLANT AND FIELD.	
TEACHER'S GUIDE.		VOLUME 1.	
VT 005 963	17	LABORATORY EXPERIMENTS	
PLASTIC PROJECTS. FIRST SEMESTER.		VT 002 559 ED 032 381	10
VT 005 964	17	SCIENTIFIC AND ENGINEERING	
INTERMEDIATE PLASTIC PROJECTS.		INFLUENCES ON INDUSTRIAL ARTS. A	
VT 007 363	26	SUMMARY OF INSTITUTE ACTIVITIES	
TEACHING AIDS IN ELECTRICITY.		(NDEA SUMMER INST., COLLEGE	
VT 008 259 ED 039 315	35	STATION, TEX.).	
INSTRUCTIONAL UNITS FOR INDUSTRIAL		VT 004 636	13
MATERIALS, VOL. II.		EXPERIMENTS AND INSTRUCTIONAL UNITS	
VT 009 779	43	FOR INDUSTRIAL MATERIALS AS AN	
INDUSTRIAL TESTING; INDUSTRIAL ARTS		INTEGRATED PART OF THE INDUSTRIAL	
TEACHING GUIDE.		ARTS,	
VT 010 290 ED 037 554	44	VT 008 259 ED 039 315	35
DEVELOPMENT AND STRUCTURE OF		INSTRUCTIONAL UNITS FOR INDUSTRIAL	
INDUSTRY: INFORMATION AND JOB		MATERIALS, VOL. II.	
SHEETS.		VT 008 733	39
VT 010 737	47	POWER: PRIME MOVER OF TECHNOLOGY.	
DEMONSTRATION AIDS FOR AVIATION		LABORATORY MANUAL.	
EDUCATION.		LABORATORY MANUALS	
VT 011 399 ED 040 303	48	VT 008 733	39
INDIVIDUALIZED MATERIAL FOR		POWER: PRIME MOVER OF TECHNOLOGY.	
INDUSTRIAL EDUCATION BASED ON THE		LABORATORY MANUAL.	
AVA BOOKLET "A GUIDE TO IMPROVING		VT 010 276	44
INSTRUCTION IN INDUSTRIAL ARTS".		BASIC ELECTRICITY, THEORY AND	
VT 011 775	52	PRACTICE.	
SAFETY IN INDUSTRIAL ARTS		LABORATORY SAFETY	
LABORATORIES.		VT 002 345	9
VT 011 998 ED 047 088	53	INDUSTRIAL ARTS SAFETY INSTRUCTION.	
BIBLIOGRAPHY OF INDUSTRIAL ARTS		VT 009 867	43
EDUCATION DOCUMENTS.		SAFETY HANDBOOK; A GUIDE FOR	
VT 012 759	55	INDUSTRIAL ARTS PROGRAMS, AND	
INDUSTRIAL ARTS AEROSPACE FOR		TRANSPARENCY MASTERS.	
INTERMEDIATE AND JUNIOR HIGH		VT 009 942 ED 035 733	44
SCHOOLS. EXPERIMENTAL MATERIALS,		AN ACCIDENT PREVENTION PROGRAM FOR	
FIRST DRAFT.		SCHOOL SHOPS AND LABORATORIES; A	
INTERMEDIATE GRADES		SUGGESTED GUIDE FOR SCHOOL	
VT 003 553	11	ADMINISTRATORS.	
DRAFTING EXPERIENCES FOR		VT 011 495	50
INTERMEDIATE SCHOOL PUPILS.		SAFETY, YOUR CONCERN AND MINE.	
JOB SKILLS		LEARNING ACTIVITY PACKAGE, SAFETY	
VT 009 081	40	IN THE WOOD SHOP.	
A SUGGESTED GUIDE FOR TEACHING SLOW		VT 011 497	51
LEARNERS IN INDUSTRIAL ARTS IN THE		SAFETY IN THE AUTO SHOP.	
PUBLIC SCHOOLS.		VT 011 775	52
JUNIOR HIGH SCHOOLS		SAFETY IN INDUSTRIAL ARTS	
VT 000 506	3	LABORATORIES.	
INDUSTRIAL ARTS COURSE OUTLINES,		VT 012 741	54
GRADES SEVEN, EIGHT, AND NINE.		WOODWORK 1-2.	
VT 000 898	4	LEARNING ACTIVITIES	
INDUSTRIAL ARTS CURRICULUM GUIDE		VT 011 495	49
FOR SEVENTH AND EIGHTH GRADES.		LETTERING, LAP--UNIT 1. ENGINEERING	
VT 001 359	6	20, BASIC DRAFTING.	
INDUSTRIAL ARTS.		VT 011 486	49
VT 003 035	11	INSTRUMENT TECHNIQUE, LAP--UNIT II.	
INDUSTRIAL ARTS IN GENERAL		ENGINEERING 20, BASIC DRAFTING.	
EDUCATION.		VT 011 487	49
VT 005 164	14	THE ABC'S OF VIEWS OF OBJECTS. MINI	
EARLY SECONDARY INDUSTRIAL ARTS.		LAP--UNIT 3. BASIC DRAFTING SURVEY	
VT 009 281	41	CLASS.	
INTERPRETING INDUSTRY THROUGH LINE			
PRODUCTION.			

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT 011 488	49	VT 010 276	44
MULTI-VIEW DRAWINGS, LAP--UNIT IV.		BASIC ELECTRICITY, THEORY AND	
ENGINEERING 20, BASIC DRAFTING.		PRACTICE.	
VT 011 489	49	LOW ABILITY STUDENTS	
INTRODUCTION TO APPLIED DRAWING.		VT 009 081	40
BASIC DRAFTING SURVEY CLASS, UNIT		A SUGGESTED GUIDE FOR TEACHING SLOW	
5.		LEARNERS IN INDUSTRIAL ARTS IN THE	
VT 011 490	50	PUBLIC SCHOOLS.	
ADVANCED MULTI-VIEW DRAWINGS,		MAINE	
LAP--UNIT VI. ENGINEERING 20, BASIC		VT 000 017 ED 026 449	2
DRAFTING.		INDUSTRIAL ARTS AND TECHNOLOGY IN	
VT 011 491	50	MAINE, A STUDY OF AMERICAN	
AUXILIARY VIEWS, LAP--UNIT VII.		INDUSTRY. A GUIDE FOR SECONDARY	
ENGINEERING 20, BASIC DRAFTING.		SCHOOLS IN MAINE.	
VT 011 492	50	MANUALS	
SECTIONAL VIEWS, LAP--UNIT VIII.		VT 006 236	18
ENGINEERING 20, BASIC DRAFTING.		DRAFTING STANDARDS MANUAL.	
VT 011 493	50	VT 009 867	43
DIMENSIONING LAP--UNIT IX.		SAFETY HANDBOOK; A GUIDE FOR	
ENGINEERING 20, BASIC DRAFTING.		INDUSTRIAL ARTS PROGRAMS, AND	
VT 011 494	50	TRANSPARENCY MASTERS.	
WORKING DRAWINGS, LAP--UNIT X.		MANUFACTURING	
ENGINEERING 20, BASIC DRAFTING.		VT 004 851	14
VT 011 495	50	GENERAL INDUSTRIAL ARTS	
SAFETY, YOUR CONCERN AND MINE.		(MANUFACTURING),	
LEARNING ACTIVITY PACKAGE, SAFETY		VT 007 850 ED 028 266	30
IN THE WOOD SHOP.		GUIDES IN CONSTRUCTION AND	
VT 011 496	51	MANUFACTURING FOR ELEMENTARY SCHOOL	
COMPONENTS OF THE AUTOMOBILE.		INDUSTRIAL ARTS. K-2; 3-4; 5-6.	
VT 011 497	51	VT 008 004	32
SAFETY IN THE AUTO SHOP.		A STUDY OF MANUFACTURING	
VT 011 498	51	INDUSTRIES. AN EXPERIMENTAL COURSE	
GEOMETRY OF DRAWING, DRAFTING.		AT THE JUNIOR HIGH SCHOOL LEVEL	
VT 011 502	51	COMBINING STUDENTS OF GRADES SEVEN,	
DIMENSIONING RULES AND PRINCIPLES.		EIGHT, AND NINE.	
LAP NO. 11.		VT 008 052	33
VT 011 507	52	INDUSTRIAL ARTS.	
PICTORIAL DRAWINGS.		VT 008 872	39
DRAFTING--LANGUAGE OF INDUSTRY. LAP		INDUSTRIAL ARTS CURRICULUM GUIDE:	
NO. 8, BASIC DRAFTING.		INDUSTRIAL ARTS, 1968-1969.	
VT 011 549	52	MANUFACTURING INDUSTRY	
IDENTIFICATION, CARE, AND USES OF		VT 007 844 ED 031 554	29
HAND TOOLS.		UNITS FOR THE LABORATORY OF	
VT 011 550	52	INDUSTRIES.	
FIND YOUR WAY. LEARNING ACTIVITY		MASS PRODUCTION	
PACKAGE, "PRE-LAP".		VT 009 281	41
VT 013 061	55	INTERPRETING INDUSTRY THROUGH LINE	
INDUSTRIAL ARTS FOR IOWA SCHOOLS.		PRODUCTION.	
LEATHER		MATERIAL DEVELOPMENT	
VT 007 779	29	VT 004 592 ED 020 349	13
BEGINNING LEATHERCRAFT PROJECTS FOR		NDEA TITLE XI INSTITUTE FOR	
THE INDUSTRIAL ARTS.		ADVANCED STUDY IN INDUSTRIAL ARTS..	
VT 007 780	29	(SAN JOSE STATE COLLEGE, JUNE	
INTERMEDIATE LEATHERCRAFT PROJECTS		19-JULY 28, 1967). FINAL TECHNICAL	
FOR THE INDUSTRIAL ARTS.		REPORT.	
LESSON PLANS		METAL WORKERS	
VT 000 239	2	VT 000 306	2
INDUSTRIAL ARTS SUPPLEMENT.		INFORMATION ON HAND TOOLS FOR	
VT 005 915	16	METALWORKING TRADES.	
INSTRUCTOR'S GUIDE FOR SENIOR HIGH			
SCHOOL WOODWORK IN THE TULSA PUBLIC			
SCHOOLS (TENTATIVE).			
VT 007 844 ED 031 554	29		
UNITS FOR THE LABORATORY OF			
INDUSTRIES.			

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
METAL WORKING OCCUPATIONS		VT 007 859 ED 031 558	31
VT 006 650	21	LUMBER AND RELATED PRODUCTS; A BASE SYLLABUS ON WOOD TECHNOLOGY.	
GENERAL METAL WORK 1 AND 2. COURSE OF STUDY.		VT 007 860 ED 031 559	31
VT 009 706	43	WOOD SUBSTITUTES; A BASE SYLLABUS ON WOOD TECHNOLOGY.	
METALWORKING; VOCATIONAL-INDUSTRIAL EDUCATION CURRICULUM GUIDE. CURRICULUM BULLETIN SERIES.		VT 007 861 ED 031 560	31
VT 010 505	46	WOOD PROPERTIES AND KINDS; A BASE SYLLABUS ON WOOD TECHNOLOGY.	
MODERN METALWORKING TECHNOLOGY.		NATIONAL SAFETY COUNCIL	
VT 011 295	47	VT 009 942 ED 035 733	44
CURRICULUM GUIDE IN METALS, GRADES SEVEN THROUGH TWELVE.		AN ACCIDENT PREVENTION PROGRAM FOR SCHOOL SHOPS AND LABORATORIES; A SUGGESTED GUIDE FOR SCHOOL ADMINISTRATORS.	
METALLURGY		NATURAL SCIENCES	
VT 010 505	46	VT 010 737	47
MODERN METALWORKING TECHNOLOGY.		DEMONSTRATION AIDS FOR AVIATION EDUCATION.	
METALS		NOEA INSTITUTE	
VT 001 200	6	VT 008 259 ED 039 315	35
INSTRUCTIONAL GUIDE FOR METALS.		INSTRUCTIONAL UNITS FOR INDUSTRIAL MATERIALS, VOL. II.	
VT 003 286	11	ORTHOGONAL PROJECTION	
RELATED INFORMATION FOR THE STUDY OF FERROUS INDUSTRY.		VT 011 487	49
VT 003 977	12	THE ABC'S OF VIEWS OF OBJECTS. MINI LAP--UNIT 3. BASIC DRAFTING SURVEY CLASS.	
JUNIOR HIGH SCHOOL METALS, A CURRICULUM GUIDE.		VT 011 498	51
VT 004 343	12	GEOMETRY OF DRAWING, DRAFTING.	
INDUSTRIAL ARTS METALWORKING.		PERFORMANCE TESTS	
VT 006 247	18	VT 006 976	22
INDUSTRIAL ARTS CURRICULUM GUIDE FOR METALS.		PERFORMANCE PRE-TEST FOR STUDENTS USING THE EXPANDABLE POLYSTYRENE PLASTICS UNIT.	
VT 006 650	21	VT 006 978	22
GENERAL METAL WORK 1 AND 2. COURSE OF STUDY.		PERFORMANCE CHECKLIST NO. 1; THE PRE-EXPANSION OF EXPANDABLE POLYSTYRENE BEADS.	
VT 008 382	37	PERIODICALS	
INDUSTRIAL ARTS. METALS.		VT 005 128	14
VT 009 706	43	REVISED APPROVED BOOK LIST, INDUSTRIAL ARTS, GRADES K-12.	
METALWORKING; VOCATIONAL-INDUSTRIAL EDUCATION CURRICULUM GUIDE. CURRICULUM BULLETIN SERIES.		PLANT SCIENCE	
VT 010 605	46	VT 007 861 ED 031 560	31
METALWORK 1-2.		WOOD PROPERTIES AND KINDS; A BASE SYLLABUS ON WOOD TECHNOLOGY.	
VT 011 295	47	PLASTICS	
CURRICULUM GUIDE IN METALS, GRADES SEVEN THROUGH TWELVE.		VT 002 004	8
VT 012 371	54	AN EXPERIMENTAL RESOURCE UNIT IN PLASTICS FOR INDUSTRIAL ARTS.	
MATERIALS TECHNOLOGY. RESOURCE GUIDE FOR EFFECTIVE INSTRUCTION IN INDUSTRIAL ARTS.		VT 003 978	12
NATIONAL DEFENSE EDUCATION ACT TITLE XI INSTITUTE		WOOD AND PLASTIC, A GUIDE FOR GRADES 10-11-12.	
VT 007 844 ED 031 554	29	VT 005 963	17
UNITS FOR THE LABORATORY OF INDUSTRIES.		PLASTIC PROJECTS. FIRST SEMESTER.	
VT 007 850 ED 028 266	30	VT 005 964	17
GUIDES IN CONSTRUCTION AND MANUFACTURING FOR ELEMENTARY SCHOOL INDUSTRIAL ARTS. K-2; 3-4; 5-6.		INTERMEDIATE PLASTIC PROJECTS.	
VT 007 853 ED 031 555	30		
WOODWORKING TECHNOLOGY.			
VT 007 857 ED 031 556	30		
LAMINATING AND BENDING; A BASE SYLLABUS ON WOOD TECHNOLOGY.			
VT 007 858 ED 031 557	31		
ADHESIVES; A BASE SYLLABUS ON WOOD TECHNOLOGY.			

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT 006 976	22	VT 009 674	42
PERFORMANCE PRE-TEST FOR STUDENTS		POWER MECHANICS.	
USING THE EXPANDABLE POLYSTYRENE		VT 012 899	55
PLASTICS UNIT.		INDUSTRIAL ARTS POWER MECHANICS.	
VT 006 977	22	PRETECHNOLOGY PROGRAMS	
KNOWLEDGE PRE-TEST; CONSTRUCTING		VT 005 279	15
EXPANDABLE POLYSTYRENE PLASTIC ICE		THE PRE-TECHNICAL PROJECT.	
BUCKET.		PRETESTS	
VT 006 978	22	VT 006 985	24
PERFORMANCE CHECKLIST NO. 1; THE		ELECTRIC ARC WELDING; KNOWLEDGE	
PRE-EXPANSION OF EXPANDABLE		PRE-TEST.	
POLYSTYRENE BEADS.		VT 007 011	25
VT 006 979	22	ELECTRIC ARC WELDING; STUDENT	
EXPANDABLE POLYSTYRENE PLASTICS.		PERFORMANCE PRE-TEST.	
INSTRUCTION BOOK NO. 1,		PREVOCATIONAL EDUCATION	
PRE-EXPANSION OF EXPANDABLE		VT 002 506	9
POLYSTYRENE BEADS.		NEBRASKA INDUSTRIAL EDUCATION	
VT 006 980	22	CURRICULUM GUIDE, GRADES 7-12.	
EXPANDABLE POLYSTYRENE PLASTICS.		VT 006 248	18
INSTRUCTION BOOK NO. 2, PREPARATION		INDUSTRIAL ARTS CURRICULUM GUIDE	
AND ASSEMBLY OF MOLD.		FOR WOODWORKING.	
VT 006 981	23	VT 006 249	19
EXPANDABLE POLYSTYRENE PLASTICS.		INDUSTRIAL ARTS CURRICULUM GUIDE	
INSTRUCTION BOOK NO. 3, MOLDING THE		FOR POWER MECHANICS.	
PRE-EXPANDED POLYSTYRENE BEADS.		VT 007 308	26
VT 006 982	23	EQUIPMENT, TOOLS AND MATERIALS, AS	
EXPANDABLE POLYSTYRENE PLASTICS.		PROPOSED BY THE TECHNOLOGY FOR	
INSTRUCTION BOOK NO. 4, REMOVING		CHILDREN PROJECT.	
THE FOAMED PIECE.		VT 009 704	42
VT 006 983	23	ARTS AND CRAFTS FOR K TO 6.	
EXPANDABLE POLYSTYRENE PLASTICS;		PRINTING	
STUDENT GUIDE.		VT 005 914	16
VT 006 984	23	INSTRUCTOR'S GUIDE FOR PRINTING 1	
EXPANDABLE POLYSTYRENE PLASTICS;		AND 2.	
TEACHER'S GUIDE.		VT 006 765	21
VT 008 385	37	GRAPHIC ARTS 1 AND 2. COURSE OF	
INDUSTRIAL ARTS. PLASTICS.		STUDY.	
VT 012 371	54	PRODUCTION TECHNIQUES	
MATERIALS TECHNOLOGY. RESOURCE		VT 007 334	26
GUIDE FOR EFFECTIVE INSTRUCTION IN		FABRICATION TECHNIQUES FOR TURBINE	
INDUSTRIAL ARTS.		COMPONENTS.	
POST TESTING		PRODUCTION TECHNOLOGY	
VT 006 998	24	VT 008 052	33
BASIC ELECTRICITY; STUDENT		INDUSTRIAL ARTS.	
WORKBOOK, INSTRUCTORS GUIDE AND		PROGRAM ADMINISTRATION	
TESTS.		VT 002 860	10
POWER MECHANICS		AMERICAN INDUSTRY TECHNICAL REPORT,	
VT 002 112	8	1965-66.	
A GUIDE FOR TEACHING POWER		VT 008 796	39
MECHANICS IN INDUSTRIAL ARTS IN		ORGANIZATION AND ADMINISTRATION	
INDIANA.		FORMS FOR INDUSTRIAL ARTS.	
VT 006 249	19	PROGRAM CONTENT	
INDUSTRIAL ARTS CURRICULUM GUIDE		VT 009 658	42
FOR POWER MECHANICS.		GUIDELINES FOR ESTABLISHING AND	
VT 008 156	34	EVALUATING DRAFTING AND DESIGN	
INDUSTRIAL ARTS; POWER MECHANICS		TECHNOLOGY PROGRAMS.	
AND SMALL ENGINES.		PROGRAM DESCRIPTIONS	
VT 008 733	39	VT 001 958	7
POWER: PRIME MOVER OF TECHNOLOGY.		INDUSTRIAL ARTS CURRICULUM PLANNING	
LABORATORY MANUAL.		GUIDE, GRADES 7-12.	
VT 008 734	39		
POWER: PRIME MOVER OF TECHNOLOGY.			
TEACHER'S MANUAL.			
VT 008 872	39		
INDUSTRIAL ARTS CURRICULUM GUIDE:			
INDUSTRIAL ARTS, 1968-1969.			

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT C03 035 INDUSTRIAL ARTS IN GENERAL EDUCATION.	11	VT C08 238 A GUIDE TO IMPROVEMENT OF INDUSTRIAL ARTS IN OKLAHOMA SCHOOLS GRADES 7-12.	34
VT 008 238 A GUIDE TO IMPROVEMENT OF INDUSTRIAL ARTS IN OKLAHOMA SCHOOLS GRADES 7-12.	34	VT 008 270 HANDBOOK FOR INDUSTRIAL ARTS EDUCATION.	36
VT 008 407 ELEMENTARY SCHOOL INDUSTRIAL ARTS.	37	VT 009 658 GUIDELINES FOR ESTABLISHING AND EVALUATING DRAFTING AND DESIGN TECHNOLOGY PROGRAMS.	42
VT 009 072 ED 031 594 DEVELOPING AMERICAN INDUSTRY COURSES FOR THE SECONDARY SCHOOL.	40	PROGRAMED TEXTS	
VT 011 363 INDUSTRIAL ARTS CURRICULUM GUIDE FOR THE STATE OF WYOMING GRADES K-12.	48	VT 006 979 EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 1, PRE-EXPANSION OF EXPANDABLE POLYSTYRENE BEADS.	22
PROGRAM DESIGN		VT 006 980 EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 2, PREPARATION AND ASSEMBLY OF MOLO.	22
VT 013 061 INDUSTRIAL ARTS FOR IOWA SCHOOLS.	55	VT 006 981 EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 3, MOLDING THE PRE-EXPANDED POLYSTYRENE BEADS.	23
PROGRAM DEVELOPMENT		VT 006 989 ELECTRIC ARC WELDING; INSTRUCTION BOOK II.	24
VT 008 219 COUNTY COURSE OF STUDY: INDUSTRIAL ARTS.	34	VT 007 001 OXY-ACETYLENE WELDING SERIES; INSTRUCTION BOOK 2.	25
VT 012 368 INDUSTRIAL ARTS PROGRAMING FOR JUNIOR AND SENIOR HIGH SCHOOLS.	53	VT 007 002 OXY-ACETYLENE WELDING SERIES; INSTRUCTION BOOK 1.	25
PROGRAM EVALUATION		VT 007 360 ELECTRIC ARC WELDING. INSTRUCTION BOOK.	26
VT 004 592 ED 020 349 NDEA TITLE XI INSTITUTE FOR ADVANCED STUDY IN INDUSTRIAL ARTS (SAN JOSE STATE COLLEGE, JUNE 19-JULY 28, 1967). FINAL TECHNICAL REPORT.	13	PROJECT AMERICAN INDUSTRY	
VT 009 658 GUIDELINES FOR ESTABLISHING AND EVALUATING DRAFTING AND DESIGN TECHNOLOGY PROGRAMS.	42	VT 009 072 ED 031 594 DEVELOPING AMERICAN INDUSTRY COURSES FOR THE SECONDARY SCHOOL.	40
PROGRAM GUIDES		PROJECT CUE	
VT 000 887 THE PROGRAM OF INDUSTRIAL ARTS EDUCATION IN KENTUCKY. EDUCATIONAL BULLETIN, V. 31, NO. 8.	4	VT 002 009 ED 022 843 INDUSTRIAL ARTS HUMANITIES MEDIA GUIDE: CUE.	8
VT 001 479 INDUSTRIAL EDUCATION IN HAMPTON SCHOOL SYSTEM, 1966-1967.	6	PROJECT TECHNOLOGY FOR CHILDREN	
VT 002 778 ED 022 849 INDUSTRIAL ARTS; A GUIDE FOR COLORADO SCHOOLS.	10	VT 007 388 TECHNOLOGY FOR CHILDREN PROJECT. RECOMMENDED PROCEDURES FOR SAFETY AND USE OF HAND TOOLS IN THE ELEMENTARY CLASSROOM.	27
VT 004 596 HANDBOOK FOR INSTRUCTORS OF INDUSTRIAL ARTS AND VOCATIONAL EDUCATION.	13	RECORDS (FORMS)	
VT 007 263 INDUSTRIAL ARTS IN THE JUNIOR HIGH SCHOOL.	25	VT 008 796 ORGANIZATION AND ADMINISTRATION FORMS FOR INDUSTRIAL ARTS.	39
VT 007 730 INDUSTRIAL ARTS; A STUDY OF INDUSTRIAL TECHNOLOGY. INTERIM BULLETIN.	29	REFERENCE MATERIALS	
VT 008 071 INDUSTRIAL ARTS; SAFETY GUIDE.	33	VT 004 684 REFERENCE AND AUDIO-VISUAL MATERIALS ON IRON AND STEEL. A TEACHER'S GUIDE.	13
VT 008 219 COUNTY COURSE OF STUDY: INDUSTRIAL ARTS.	34	VT 005 128 REVISED APPROVED BOOK LIST, INDUSTRIAL ARTS, GRADES K-12.	14

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
RELATED INSTRUCTION		VT 010 290 ED 037 554	44
VT 008 328	36	DEVELOPMENT AND STRUCTURE OF	
SUGGESTED RELATED INFORMATION FOR		INDUSTRY: INFORMATION AND JOB	
THE METAL AREA. INDUSTRIAL ARTS		SHEETS.	
COMPREHENSIVE GENERAL SHOP COURSE.		VT 010 313 ED 037 555	45
RESOURCE GUIDES		DEVELOPMENT AND STRUCTURE OF	
VT 000 239	2	INDUSTRY: TEACHING PLAN AND	
INDUSTRIAL ARTS SUPPLEMENT.		ACTIVITY PLAN SHEETS.	
VT 003 553	11	VT 010 314 ED 037 556	45
DRAFTING EXPERIENCES FOR		DEVELOPMENT AND STRUCTURE OF	
INTERMEDIATE SCHOOL PUPILS.		INDUSTRY: STUDY GUIDE.	
VT 006 598	21	VT 010 315 ED 037 557	45
DRAFTING I. STUDENT PROBLEMS.		DEVELOPMENT AND STRUCTURE OF	
VT 008 269 ED 026 273	36	INDUSTRY: INSTRUCTIONAL AIDS LIST	
SPACE RESOURCES FOR THE HIGH		AND BIBLIOGRAPHY.	
SCHOOL. INDUSTRIAL ARTS RESOURCE		VT 011 998 ED 047 088	53
UNITS.		BIBLIOGRAPHY OF INDUSTRIAL ARTS	
VT 009 942 ED 035 733	44	EDUCATION DOCUMENTS.	
AN ACCIDENT PREVENTION PROGRAM FOR		VT 012 748	54
SCHOOL SHOPS AND LABORATORIES; A		DRAFTING (INSTRUCTIONAL	
SUGGESTED GUIDE FOR SCHOOL		SUPPLEMENT).	
ADMINISTRATORS.		VT 012 759	55
RESOURCE MATERIALS		INDUSTRIAL ARTS AEROSPACE FOR	
VT 000 239	2	INTERMEDIATE AND JUNIOR HIGH	
INDUSTRIAL ARTS SUPPLEMENT.		SCHOOLS. EXPERIMENTAL MATERIALS,	
VT 001 359	6	FIRST DRAFT.	
INDUSTRIAL ARTS.		VT 013 061	55
VT 006 155 ED 041 099	17	INDUSTRIAL ARTS FOR IOWA SCHOOLS.	
ELEMENTARY SCHOOL INDUSTRIAL		RESOURCE UNITS	
ARTS--SELECTED READINGS AND		VT 000 549	4
RESOURCES.		INDUSTRIAL ARTS AND VOCATIONAL	
VT 006 244	18	EDUCATION, SAFETY MANUAL.	
INDUSTRIAL ARTS CURRICULUM GUIDE		VT 002 002 ED 021 963	7
FOR INDUSTRIAL CRAFTS IN OHIO		CERAMICS, PROJECT IDEAS FOR	
SCHOOLS.		INDUSTRIAL ARTS.	
VT 007 334	26	VT 002 004	8
FABRICATION TECHNIQUES FOR TURBINE		AN EXPERIMENTAL RESOURCE UNIT IN	
COMPONENTS.		PLASTICS FOR INDUSTRIAL ARTS.	
VT 007 807	29	VT 003 286	11
HOW TO USE TAPS, DIES AND HIGH		RELATED INFORMATION FOR THE STUDY	
SPEED STEEL DRILLS.		OF FERROUS INDUSTRY.	
VT 007 857 ED 031 556	30	VT 007 853 ED 031 555	30
LAMINATING AND BENDING; A BASE		WOODWORKING TECHNOLOGY.	
SYLLABUS ON WOOD TECHNOLOGY.		ROCHESTER CITY SCHOOL DISTRICT	
VT 007 858 ED 031 557	31	VT 006 462	20
ADHESIVES; A BASE SYLLABUS ON WOOD		INDUSTRIAL ARTS TEACHERS' HANDBOOK.	
TECHNOLOGY.		SAFETY	
VT 007 859 ED 031 558	31	VT 000 549	4
LUMBER AND RELATED PRODUCTS; A BASE		INDUSTRIAL ARTS AND VOCATIONAL	
SYLLABUS ON WOOD TECHNOLOGY.		EDUCATION, SAFETY MANUAL.	
VT 007 860 ED 031 559	31	VT 011 074	47
WOOD SUBSTITUTES; A BASE SYLLABUS		INDUSTRIAL ARTS SAFETY CHECKLIST.	
ON WOOD TECHNOLOGY.		VT 011 550	52
VT 007 861 ED 031 560	31	FIND YOUR WAY. LEARNING ACTIVITY	
WOOD PROPERTIES AND KINDS; A BASE		PACKAGE, "PRE-LAP".	
SYLLABUS ON WOOD TECHNOLOGY.		SAFETY EDUCATION	
VT 008 256	35	VT 002 345	9
ELECTRICITY PROJECT IDEAS FOR		INDUSTRIAL ARTS SAFETY INSTRUCTION.	
INDUSTRIAL ARTS.		VT 009 942 ED 035 733	44
VT 008 259 ED 039 315	35	AN ACCIDENT PREVENTION PROGRAM FOR	
INSTRUCTIONAL UNITS FOR INDUSTRIAL		SCHOOL SHOPS AND LABORATORIES; A	
MATERIALS, VOL. II.		SUGGESTED GUIDE FOR SCHOOL	
VT 008 268	36	ADMINISTRATORS.	
SAFETY EDUCATION IN THE SCHOOL			
SHOP.			
VT 008 664	38		
A GUIDE TO BETTER TEACHING.			

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT 010 301	44	SECONDARY GRADES	
SAFE USE OF HAND AND PORTABLE POWER TOOLS.		VT 000 017 ED 026 449	2
SCHOOL SAFETY		INDUSTRIAL ARTS AND TECHNOLOGY IN MAINE, A STUDY OF AMERICAN INDUSTRY. A GUIDE FOR SECONDARY SCHOOLS IN MAINE.	
VT 007 388	27	VT 007 844 ED 031 554	29
TECHNOLOGY FOR CHILDREN PROJECT. RECOMMENDED PROCEDURES FOR SAFETY AND USE OF HAND TOOLS IN THE ELEMENTARY CLASSROOM.		UNITS FOR THE LABORATORY OF INDUSTRIES.	
VT 008 071	33	VT 008 993	40
INDUSTRIAL ARTS; SAFETY GUIDE.		WOODWORKING: VOCATIONAL-INDUSTRIAL EDUCATION CURRICULUM GUIDE.	
VT 008 268	36	SECONDARY SCHOOLS	
SAFETY EDUCATION IN THE SCHOOL SHOP.		VT 008 796	39
VT 009 942 ED 035 733	44	ORGANIZATION AND ADMINISTRATION FORMS FOR INDUSTRIAL ARTS.	
AN ACCIDENT PREVENTION PROGRAM FOR SCHOOL SHOPS AND LABORATORIES; A SUGGESTED GUIDE FOR SCHOOL ADMINISTRATORS.		VT 012 368	53
SCHOOL SHOPS		INDUSTRIAL ARTS PROGRAMING FOR JUNIOR AND SENIOR HIGH SCHOOLS.	
VT 008 071	33	SENIOR HIGH SCHOOLS	
INDUSTRIAL ARTS; SAFETY GUIDE.		VT 000 508	3
VT 008 268	36	INDUSTRIAL ARTS PROGRAMING FOR THE HIGH SCHOOL. (BULLETIN, NO. 2148).	
SAFETY EDUCATION IN THE SCHOOL SHOP.		SHEET METAL WORK	
VT 011 550	52	VT 011 295	47
FIND YOUR WAY. LEARNING ACTIVITY PACKAGE, "PRE-LAP".		CURRICULUM GUIDE IN METALS, GRADES SEVEN THROUGH TWELVE.	
VT 012 368	53	SHILCH JUNIOR HIGH SCHOOL	
INDUSTRIAL ARTS PROGRAMING FOR JUNIOR AND SENIOR HIGH SCHOOLS.		VT 008 004	32
SCIENTIFIC PRINCIPLES		A STUDY OF MANUFACTURING INDUSTRIES. AN EXPERIMENTAL COURSE AT THE JUNIOR HIGH SCHOOL LEVEL COMBINING STUDENTS OF GRADES SEVEN, EIGHT, AND NINE.	
VT 012 899	55	SHOP CURRICULUM	
INDUSTRIAL ARTS POWER MECHANICS.		VT 011 087	47
SCRIPTS		INDUSTRIAL ARTS CURRICULUM GUIDE.	
VT 009 306	41	SLOW LEARNERS	
APPLIED DESIGN.		VT 009 081	40
VT 009 316	42	A SUGGESTED GUIDE FOR TEACHING SLOW LEARNERS IN INDUSTRIAL ARTS IN THE PUBLIC SCHOOLS.	
USING THE ELECTRONIC WOOD WELDER.		STANDARDS	
SECONDARY EDUCATION		VT 006 236	18
VT 001 958	7	DRAFTING STANDARDS MANUAL.	
INDUSTRIAL ARTS CURRICULUM PLANNING GUIDE, GRADES 7-12.		STATE CURRICULUM GUIDES	
VT 010 290 ED 037 554	44	VT 000 017 ED 026 449	2
DEVELOPMENT AND STRUCTURE OF INDUSTRY: INFORMATION AND JOB SHEETS.		INDUSTRIAL ARTS AND TECHNOLOGY IN MAINE, A STUDY OF AMERICAN INDUSTRY. A GUIDE FOR SECONDARY SCHOOLS IN MAINE.	
VT 010 313 ED 037 555	45	VT 000 506	3
DEVELOPMENT AND STRUCTURE OF INDUSTRY: TEACHING PLAN AND ACTIVITY PLAN SHEETS.		INDUSTRIAL ARTS COURSE OUTLINES, GRADES SEVEN, EIGHT, AND NINE.	
VT 010 314 ED 037 556	45	VT 001 200	6
DEVELOPMENT AND STRUCTURE OF INDUSTRY: STUDY GUIDE.		INSTRUCTIONAL GUIDE FOR METALS.	
VT 010 315 ED 037 557	45	VT 001 958	7
DEVELOPMENT AND STRUCTURE OF INDUSTRY: INSTRUCTIONAL AIDS LIST AND BIBLIOGRAPHY.		INDUSTRIAL ARTS CURRICULUM PLANNING GUIDE, GRADES 7-12.	

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
VT 002 112	8	VT 007 779	29
A GUIDE FOR TEACHING POWER MECHANICS IN INDUSTRIAL ARTS IN INDIANA.		BEGINNING LEATHERCRAFT PROJECTS FOR THE INDUSTRIAL ARTS.	
VT 002 506	9	VT 007 780	29
NEBRASKA INDUSTRIAL EDUCATION CURRICULUM GUIDE, GRADES 7-12.		INTERMEDIATE LEATHERCRAFT PROJECTS FOR THE INDUSTRIAL ARTS.	
VT 006 244	18	VT 008 256	35
INDUSTRIAL ARTS CURRICULUM GUIDE FOR INDUSTRIAL CRAFTS IN CHIC SCHOLS.		ELECTRICITY PROJECT IDEAS FOR INDUSTRIAL ARTS.	
VT 006 246	18	VT 008 733	39
INDUSTRIAL ARTS CURRICULUM GUIDE FOR DRAFTING.		POWER: PRIME MOVER OF TECHNOLOGY. LABORATORY MANUAL.	
VT 006 430	20	VT 012 759	55
THE NEW MEXICO STATE PLANNING GUIDE FOR INDUSTRIAL ARTS.		INDUSTRIAL ARTS AEROSPACE FOR INTERMEDIATE AND JUNIOR HIGH SCHOOLS. EXPERIMENTAL MATERIALS, FIRST DRAFT.	
VT 007 685 ED 028 259	28		
ARIZONA INDUSTRIAL ARTS: ELECTRICITY ELECTRONICS. A CURRICULUM GUIDE		STUDY GUIDES	
VT 007 689	28	VT 000 969	5
INDUSTRIAL ARTS; ELECTRICITY-ELECTRONICS.		PRINCIPLES AND PRACTICES OF TRADE AND INDUSTRIAL TEACHING	
VT 008 041	33	VT 006 983	23
INDUSTRIAL ARTS EDUCATION CURRICULUM GUIDE.		EXPANDABLE POLYSTYRENE PLASTICS: STUDENT GUIDE.	
VT 008 072	33	VT 008 251	34
INDUSTRIAL ARTS; GRAPHIC ARTS.		SUGGESTED RELATED INFORMATION FOR THE ELECTRICITY AREA. INDUSTRIAL ARTS COMPREHENSIVE GENERAL SHOP COURSE.	
VT 008 156	34	VT 008 328	36
INDUSTRIAL ARTS; POWER MECHANICS AND SMALL ENGINES.		SUGGESTED RELATED INFORMATION FOR THE METAL AREA. INDUSTRIAL ARTS COMPREHENSIVE GENERAL SHOP COURSE.	
VT 008 255	35	VT 010 314 ED 037 556	45
INDUSTRIAL ARTS EDUCATION.		DEVELOPMENT AND STRUCTURE OF INDUSTRY: STUDY GUIDE.	
VT 011 363	48	VT 011 334	48
INDUSTRIAL ARTS CURRICULUM GUIDE FOR THE STATE OF WYOMING GRADES K-12.		BEGINNING DRAFTING. A HANDBOOK FOR GRADES SEVEN AND EIGHT.	
VT 012 899	55		
INDUSTRIAL ARTS POWER MECHANICS.		SUMMER INSTITUTES	
VT 013 061	55	VT 010 505	46
INDUSTRIAL ARTS FOR IOWA SCHOOLS.		MODERN METALWORKING TECHNOLOGY.	
STATE PROGRAMS			
VT 008 407	37	SUPPLEMENTARY TEXTBOOKS	
ELEMENTARY SCHOOL INDUSTRIAL ARTS.		VT 007 384	27
VT 011 074	47	FLUID POWER IN PLANT AND FIELD. VOLUME 1.	
INDUSTRIAL ARTS SAFETY CHECKLIST.		VT 007 779	29
STEEL INDUSTRY		BEGINNING LEATHERCRAFT PROJECTS FOR THE INDUSTRIAL ARTS.	
VT 004 684	13	VT 007 780	29
REFERENCE AND AUDIO-VISUAL MATERIALS ON IRON AND STEEL. A TEACHER'S GUIDE.		INTERMEDIATE LEATHERCRAFT PROJECTS FOR THE INDUSTRIAL ARTS.	
STUDENT PROJECTS		VT 007 972	32
VT 002 002 ED 021 963	7	DESIGN FOR WELDING. SOME PRACTICAL CONSIDERATIONS IN DESIGNING STEEL WELMENTS.	
CERAMICS, PROJECT IDEAS FOR INDUSTRIAL ARTS.			
VT 005 963	17	TAXONOMY	
PLASTIC PROJECTS. FIRST SEMESTER.		VT 005 595 ED 020 429	15
VT 005 964	17	STRUCTURE AND CONTENT FOUNDATIONS FOR CURRICULUM DEVELOPMENT.	
INTERMEDIATE PLASTIC PROJECTS.			
VT 006 323	20		
INDUSTRIAL ARTS INSTRUCTIONAL GUIDE FOR GRADES K-6. ELEMENTARY SCHOOL PRACTICAL ARTS.			

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
TEACHER DEVELOPED MATERIALS		VT 006 235	17
VT 008 184 ED 033 193	34	BASIC AUTOMOBILE MECHANICS, CENTRAL	
COURSE OUTLINE AND RESOURCE		HIGH SCHOOL, GRADES 9 AND 10.	
MATERIALS FOR FLUID POWER		VT 006 323	20
INSTRUCTION IN SECONDARY SCHOOLS,		INDUSTRIAL ARTS INSTRUCTIONAL GUIDE	
PREPARED AT THE NDEA SUMMER		FOR GRADES K-6. ELEMENTARY SCHOOL	
INSTITUTE 1968.		PRACTICAL ARTS.	
VT 010 505	46	VT 006 462	20
MODERN METALWORKING TECHNOLOGY.		INDUSTRIAL ARTS TEACHERS' HANDBOOK.	
VT 011 399 ED 040 303	48	VT 006 984	23
INDIVIDUALIZED MATERIAL FOR		EXPANDABLE POLYSTYRENE PLASTICS;	
INDUSTRIAL EDUCATION BASED ON THE		TEACHER'S GUIDE.	
AVA BOOKLET "A GUIDE TO IMPROVING		VT 006 992	24
INSTRUCTION IN INDUSTRIAL ARTS".		ELECTRIC ARC WELDING; INSTRUCTOR'S	
		GUIDE.	
TEACHER EDUCATION		VT 009 281	41
VT 000 969	5	INTERPRETING INDUSTRY THROUGH LINE	
PRINCIPLES AND PRACTICES OF TRADE		PRODUCTION.	
AND INDUSTRIAL TEACHING		VT 009 288	41
VT 006 155 ED 041 099	17	A TECHNICAL DRAWING COURSE FOR	
ELEMENTARY SCHOOL INDUSTRIAL		COLLEGE-PREPARATORY STUDENTS.	
ARTS--SELECTED READINGS AND		VT 009 779	43
RESOURCES.		INDUSTRIAL TESTING; INDUSTRIAL ARTS	
		TEACHING GUIDE.	
TEACHING GUIDES		VT 010 276	44
VT 000 333	2	BASIC ELECTRICITY, THEORY AND	
GUIDELINES FOR INDUSTRIAL ARTS		PRACTICE.	
INSTRUCTION.		VT 010 301	44
VT 000 531	3	SAFE USE OF HAND AND PORTABLE POWER	
POWER.		TOOLS.	
VT 001 258	6	VT 010 313 ED 037 555	45
INDUSTRIAL ARTS WOODWORKING,		DEVELOPMENT AND STRUCTURE OF	
SECONDARY SCHOOLS.		INDUSTRY: TEACHING PLAN AND	
VT 002 004	8	ACTIVITY PLAN SHEETS.	
AN EXPERIMENTAL RESOURCE UNIT IN		VT 011 748	52
PLASTICS FOR INDUSTRIAL ARTS.		FUNCTIONS OF INDUSTRY.	
VT 002 009 ED 022 843	8	VT 012 367	53
INDUSTRIAL ARTS HUMANITIES MEDIA		ELECTRICITY--ELECTRONICS;	
GUIDE: CUE.		CURRICULUM GUIDE FOR AN	
VT 002 032	8	INTRODUCTORY COURSE.	
APPLIED ELECTRICITY. (INDUSTRIAL		VT 012 741	54
ARTS SERIES).		WOODWORK 1-2.	
VT 002 112	8	VT 012 752	54
A GUIDE FOR TEACHING POWER		MECHANICAL DRAWING 1-4. A GUIDE FOR	
MECHANICS IN INDUSTRIAL ARTS IN		INDUSTRIAL ARTS TEACHERS.	
INDIANA.		VT 012 754	55
VT 002 345	9	7B WOODWORK.	
INDUSTRIAL ARTS SAFETY INSTRUCTION.			
VT 004 596	13	TEACHING METHODS	
HANDBOOK FOR INSTRUCTORS OF		VT 000 969	5
INDUSTRIAL ARTS AND VOCATIONAL		PRINCIPLES AND PRACTICES OF TRADE	
EDUCATION.		AND INDUSTRIAL TEACHING	
VT 004 636	13	VT 008 664	38
EXPERIMENTS AND INSTRUCTIONAL UNITS		A GUIDE TO BETTER TEACHING.	
FOR INDUSTRIAL MATERIALS AS AN			
INTEGRATED PART OF THE INDUSTRIAL		TEACHING PROCEDURES	
ARTS,		VT 000 239	2
VT 004 806	14	INDUSTRIAL ARTS SUPPLEMENT.	
TEACHER GUIDE FOR AIRBRUSH.			
VT 005 279	15	TECHNOLOGY	
THE PRE-TECHNICAL PROJECT.		VT 005 595 ED 020 429	15
VT 005 914	16	STRUCTURE AND CONTENT FOUNDATIONS	
INSTRUCTOR'S GUIDE FOR PRINTING 1		FOR CURRICULUM DEVELOPMENT.	
AND 2.			
VT 005 915	16	TECHNOLOGY FOR CHILDREN PROJECT	
INSTRUCTOR'S GUIDE FOR SENIOR HIGH		VT 007 308	26
SCHOOL WOODWORK IN THE TULSA PUBLIC		EQUIPMENT, TOOLS AND MATERIALS, AS	
SCHOOLS (TENTATIVE).		PROPOSED BY THE TECHNOLOGY FOR	
		CHILDREN PROJECT.	

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
TESTS		VT 006 260	19
VT 006 977	22	DRAFTING I.	
KNOWLEDGE PRE-TEST; CONSTRUCTING		VT 006 262	19
EXPANDABLE POLYSTYRENE PLASTIC ICE		ELECTRICITY I.	
BUCKET.		VT 006 661	21
TEXTBOOKS		AN INSTRUCTIONAL GUIDE FOR	
VT 000 306	2	INDUSTRIAL WOODWORKING.	
INFORMATION ON HAND TOOLS FOR		VT 007 384	27
METALWORKING TRADES.		FLUID POWER IN PLANT AND FIELD.	
VT 000 887	4	VOLUME 1.	
THE PROGRAM OF INDUSTRIAL ARTS		VT 007 972	32
EDUCATION IN KENTUCKY. EDUCATIONAL		DESIGN FOR WELDING. SOME PRACTICAL	
BULLETIN, V. 31, NO. 8.		CONSIDERATIONS IN DESIGNING STEEL	
VT 003 713	12	WELDMENTS.	
STATE ADOPTED TEXTBOOKS FOR		VT 008 537	38
INDUSTRIAL ARTS IN INDIANA.		VOCATIONAL INDUSTRIAL DRAFTING. A	
VT 005 128	14	TEACHER'S OUTLINE.	
REVISED APPROVED BOOK LIST,		VT 012 748	54
INDUSTRIAL ARTS, GRADES K-12.		DRAFTING (INSTRUCTIONAL	
VT 006 155 ED 041 099	17	SUPPLEMENT).	
ELEMENTARY SCHOOL INDUSTRIAL		TRANSPARENCIES	
ARTS--SELECTED READINGS AND		VT 009 867	43
RESOURCES.		SAFETY HANDBOOK; A GUIDE FOR	
VT 007 439	27	INDUSTRIAL ARTS PROGRAMS, AND	
INDUSTRIAL FLUID POWER. VOLUME 1.		TRANSPARENCY MASTERS.	
VT 007 440	27	TRANSPORTATION	
INDUSTRIAL FLUID POWER. VOLUME 2.		VT 008 253	35
VT 007 441	27	INDUSTRIAL ARTS SYLLABUS IN	
INDUSTRIAL FLUID POWER. VOLUME 3.		TRANSPORTATION.	
VT 008 269 ED 026 273	36	UNITS OF STUDY (SUBJECT FIELDS)	
SPACE RESOURCES FOR THE HIGH		VT 007 844 ED 031 554	29
SCHOOL. INDUSTRIAL ARTS RESOURCE		UNITS FOR THE LABORATORY OF	
UNITS.		INDUSTRIES.	
THREADING		VT 007 853 ED 031 555	30
VT 007 807	29	WOODWORKING TECHNOLOGY.	
HOW TO USE TAPS, DIES AND HIGH		VT 009 867	43
SPEED STEEL DRILLS.		SAFETY HANDBOOK; A GUIDE FOR	
TRADE AND INDUSTRIAL EDUCATION		INDUSTRIAL ARTS PROGRAMS, AND	
VT 000 306	2	TRANSPARENCY MASTERS.	
INFORMATION ON HAND TOOLS FOR		VOCABULARY	
METALWORKING TRADES.		VT 010 644	46
VT 000 549	4	FIRE CHEMISTRY.	
INDUSTRIAL ARTS AND VOCATIONAL		VOCATIONAL EDUCATION	
EDUCATION, SAFETY MANUAL.		VT 004 596	13
VT 000 969	5	HANDBOOK FOR INSTRUCTORS OF	
PRINCIPLES AND PRACTICES OF TRADE		INDUSTRIAL ARTS AND VOCATIONAL	
AND INDUSTRIAL TEACHING		EDUCATION.	
VT 001 479	6	VT 008 562 ED 033 195	38
INDUSTRIAL EDUCATION IN HAMPTON		INDUSTRIAL ARTS AND VOCATIONAL	
SCHOOL SYSTEM, 1966-1967.		EDUCATION IN GRADES K-12. FINAL	
VT 002 032	8	REPORT.	
APPLIED ELECTRICITY. (INDUSTRIAL		VT 010 276	44
ARTS SERIES).		BASIC ELECTRICITY, THEORY AND	
VT 002 506	9	PRACTICE.	
NEBRASKA INDUSTRIAL EDUCATION		VT 012 748	54
CURRICULUM GUIDE, GRADES 7-12.		DRAFTING (INSTRUCTIONAL	
VT 005 650	16	SUPPLEMENT).	
STATE CURRICULUM GUIDE FOR		WASHINGTON STATE	
INDUSTRIAL ARTS AND VOCATIONAL		VT 011 074	47
ELECTRICITY-ELECTRONICS.		INDUSTRIAL ARTS SAFETY CHECKLIST.	
VT 006 235	17		
BASIC AUTOMOBILE MECHANICS, CENTRAL			
HIGH SCHOOL, GRADES 9 AND 10.			
VT 006 236	18		
DRAFTING STANDARDS MANUAL.			

SUBJECT AND IDENTIFIER INDEX

	PAGE		PAGE
WELDERS		VT 006 661	21
VT 006 985	24	AN INSTRUCTIONAL GUIDE FOR	
ELECTRIC ARC WELDING; KNOWLEDGE		INDUSTRIAL WOODWORKING.	
PRE-TEST.		VT 007 853 ED 031 555	30
VT 006 989	24	WOODWORKING TECHNOLOGY.	
ELECTRIC ARC WELDING; INSTRUCTION		VT 007 857 ED 031 556	30
BOOK II.		LAMINATING AND BENDING; A BASE	
VT 006 992	24	SYLLABUS ON WOOD TECHNOLOGY.	
ELECTRIC ARC WELDING; INSTRUCTOR'S		VT 007 858 ED 031 557	31
GUIDE.		ADHESIVES; A BASE SYLLABUS ON WOOD	
VT 007 011	25	TECHNOLOGY.	
ELECTRIC ARC WELDING; STUDENT		VT 007 859 ED 031 558	31
PERFORMANCE PRE-TEST.		LUMBER AND RELATED PRODUCTS; A BASE	
VT 007 360	26	SYLLABUS ON WOOD TECHNOLOGY.	
ELECTRIC ARC WELDING. INSTRUCTION		VT 007 860 ED 031 559	31
BOOK.		WOOD SUBSTITUTES; A BASE SYLLABUS	
WELOING		ON WOOD TECHNOLOGY.	
VT 006 985	24	VT 007 861 ED 031 560	31
ELECTRIC ARC WELDING; KNOWLEDGE		WOOD PROPERTIES AND KINDS; A BASE	
PRE-TEST.		SYLLABUS ON WOOD TECHNOLOGY.	
VT 006 989	24	VT 008 384	37
ELECTRIC ARC WELDING; INSTRUCTION		INDUSTRIAL ARTS. WOODS.	
BOOK II.		VT 008 465	38
VT 006 992	24	TWENTY-EIGHT INDUSTRIAL ARTS FILMS	
ELECTRIC ARC WELDING; INSTRUCTOR'S		FROM MCGRAW-HILL.	
GUIDE.		VT 008 993	40
VT 007 001	25	WOODWORKING: VOCATIONAL-INDUSTRIAL	
OXY-ACETYLENE WELDING SERIES;		EDUCATION CURRICULUM GUIDE.	
INSTRUCTION BOOK 2.		VT 009 316	42
VT 007 002	25	USING THE ELECTRONIC WOOD WELDER.	
OXY-ACETYLENE WELDING SERIES;		VT 011 495	50
INSTRUCTION BOOK 1.		SAFETY, YOUR CONCERN AND MINE.	
VT 007 011	25	LEARNING ACTIVITY PACKAGE, SAFETY	
ELECTRIC ARC WELDING; STUDENT		IN THE WOOD SHOP.	
PERFORMANCE PRE-TEST.		VT 011 549	52
VT 007 334	26	IDENTIFICATION, CARE, AND USES OF	
FABRICATION TECHNIQUES FOR TURBINE		HAND TOOLS.	
COMPONENTS.		VT 012 741	54
VT 007 360	26	WOODWORK 1-2.	
ELECTRIC ARC WELDING. INSTRUCTION		VT 012 754	55
BOOK.		7B WOODWORK.	
VT 007 972	32	WORKBOOKS	
DESIGN FOR WELOING. SOME PRACTICAL		VT 011 334	48
CONSIDERATIONS IN DESIGNING STEEL		BEGINNING DRAFTING. A HANDBOOK FOR	
WELDMENTS.		GRADES SEVEN AND EIGHT.	
WINSTON SALEM FORSYTH COUNTY SCHOOLS			
VT 009 194	41		
SENIOR HIGH SCHOOL INDUSTRIAL ARTS.			
WOODWORKING			
VT 000 979	5		
WOODWORKING, GRADES 7-12; A			
TENTATIVE BULLETIN.			
VT 001 258	6		
INDUSTRIAL ARTS WOODWORKING,			
SECONDARY SCHOOLS.			
VT 003 978	12		
WOOD AND PLASTIC, A GUIDE FOR			
GRADES 10-11-12.			
VT 005 915	16		
INSTRUCTOR'S GUIDE FOR SENIOR HIGH			
SCHOOL WOODWORK IN THE TULSA PUBLIC			
SCHOOLS (TENTATIVE).			
VT 006 248	18		
INDUSTRIAL ARTS CURRICULUM GUIDE			
FOR WOODWORKING.			

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

	PAGE		PAGE
AFFHOLTER, GLENN H., AND OTHERS. VT 012 367 ELECTRICITY--ELECTRONICS; CURRICULUM GUIDE FOR AN INTRODUCTORY COURSE.	53	BAILEY, ROGER S. VT 009 306 APPLIED DESIGN.	41
ALBERTA DEPT. OF EDUCATION, EDMONTON VT 010 439 JUNIOR HIGH SCHOOL CURRICULUM GUIDE FOR INDUSTRIAL ARTS.	45	BARRON, LAWRENCE, AND OTHERS VT 009 081 A SUGGESTED GUIDE FOR TEACHING SLOW LEARNERS IN INDUSTRIAL ARTS IN THE PUBLIC SCHOOLS.	40
ALBERTA UNIV., EDMONTON. DEPT. OF INDUSTRIAL AND VOCATIONAL EDUCATION VT 003 035 INDUSTRIAL ARTS IN GENERAL EDUCATION.	11	BLODGETT, OMER W. VT 007 972 DESIGN FOR WELDING. SOME PRACTICAL CONSIDERATIONS IN DESIGNING STEEL WELDMENTS.	32
AMERICAN INDUSTRIAL ARTS ASSOCIATION, WASHINGTON, D.C. VT 005 595 ED 020 429 STRUCTURE AND CONTENT FOUNDATIONS FOR CURRICULUM DEVELOPMENT.	15	BOHN, RALPH C. VT 004 592 ED 020 349 NDEA TITLE XI INSTITUTE FOR ADVANCED STUDY IN INDUSTRIAL ARTS (SAN JOSE STATE COLLEGE, JUNE 19- JULY 28, 1967). FINAL TECHNICAL REPORT.	13
AMERICAN IRON AND STEEL INST., NEW YORK, N.Y. VT 004 684 REFERENCE AND AUDIO-VISUAL MATERIALS ON IRON AND STEEL. A TEACHER'S GUIDE.	13	BRAUN, DONALD, AND OTHERS VT 012 741 WOODWORK 1-2. VT 012 754 7B WOODWORK.	54 55
AMERICAN SOCIETY OF RADIOLOGIC TECHNOLOGISTS, FOND DU LAC, WIS. VT 007 363 TEACHING AIDS IN ELECTRICITY.	26	BROWN, ALBERT, AND OTHERS VT 009 288 A TECHNICAL DRAWING COURSE FOR COLLEGE-PREPARATORY STUDENTS.	41
AMERICAN WELDING SOCIETY, NEW YORK, N.Y. UNITED ENGINEERING CENTER VT 007 972 DESIGN FOR WELDING. SOME PRACTICAL CONSIDERATIONS IN DESIGNING STEEL WELDMENTS.	32	BUCHANAN, GLEN, AND OTHERS VT 008 004 A STUDY OF MANUFACTURING INDUSTRIES. AN EXPERIMENTAL COURSE AT THE JUNIOR HIGH SCHOOL LEVEL COMBINING STUDENTS OF GRADES SEVEN, EIGHT, AND NINE.	32
ANDERSON, AGNER, AND OTHERS VT 012 748 DRAFTING (INSTRUCTIONAL SUPPLEMENT).	54	BUREAU OF LABOR STANDARDS (DOL), WASHINGTON, D.C. OFFICE OF OCCUPATIONAL SAFETY. VT 010 301 SAFE USE OF HAND AND PORTABLE POWER TOOLS.	44
ARENT, WESLEY, AND OTHERS VT 012 368 INDUSTRIAL ARTS PROGRAMING FOR JUNIOR AND SENIOR HIGH SCHOOLS.	53	CALIFORNIA STATE DEPT. OF EDUCATION, SACRAMENTO VT 000 506 INDUSTRIAL ARTS COURSE OUTLINES, GRADES SEVEN, EIGHT, AND NINE. VT 002 345 INDUSTRIAL ARTS SAFETY INSTRUCTION. VT 012 845 INDUSTRIAL ARTS POWER MECHANICS.	3 9 55
ARIZONA STATE DEPT. OF PUBLIC INSTRUCTION, PHOENIX. DEPT. OF VOCATIONAL EDUCATION VT 007 685 ED 028 259 ARIZONA INDUSTRIAL ARTS: ELECTRICITY ELECTRONICS. A CURRICULUM GUIDE	28		
BAILEY, JAMES H., AND OTHERS VT 003 286 RELATED INFORMATION FOR THE STUDY OF FERROUS INDUSTRY.	11		

Due to a discrepancy between RIE format and VT-ERIC Clearinghouse format, some Institutional Authors will have multiple entries.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

	PAGE		PAGE
CALIFORNIA STATE DEPT. OF EDUCATION, SACRAMENTO. BUREAU OF INDUSTRIAL EDUCATION. VT 010 644 FIRE CHEMISTRY.	46	COCHRAN, LESLIE H. VT 008 184 EO 033 193 COURSE OUTLINE AND RESOURCE MATERIALS FOR FLUID POWER INSTRUCTION IN SECONDARY SCHOOLS, PREPARED AT THE NDEA SUMMER INSTITUTE 1968.	34
CALIFORNIA STATE POLYTECHNIC COLL., SAN LUIS OBISPO. DEPT. OF EDUCATION VT 009 306 APPLIED DESIGN.	41	COLORADO STATE DEPT. OF EDUCATION, DENVER. DIV. OF ELEMENTARY SECONDARY EDUCATION VT 002 778 EO 022 849 INDUSTRIAL ARTS; A GUIDE FOR COLORADO SCHOOLS.	10
CALIFORNIA STATE POLYTECHNIC COLL., SAN LUIS OBISPO. DEPT. OF TECHNICAL ARTS VT 009 316 USING THE ELECTRONIC WOOD WELDER.	42	COOPER, CLARE VT 011 507 PICTORIAL DRAWINGS. DRAFTING-- LANGUAGE OF INDUSTRY. LAP NO. 8, BASIC DRAFTING.	52
CENTRAL MICHIGAN UNIV., MT. PLEASANT. DEPT. OF INDUSTRIAL EDUCATION VT 003 286 RELATED INFORMATION FOR THE STUDY OF FERROUS INDUSTRY.	11	CREIGHTON, WILLIAM H., JR., AND OTHERS VT 000 398 INDUSTRIAL ARTS CURRICULUM GUIDE FOR ELECTRICITY IN OHIO SCHOOLS.	3
CHAMPAIGN COMMUNITY UNIT 4 SCHOOL DISTRICT, ILL. VT 002 650 GUIDE LINES FOR THE JUNIOR HIGH SCHOOL INDUSTRIAL ARTS PROGRAM.	10	CUMBERLAND COUNTY INDUSTRIAL ARTS TEACHERS ASSOCIATION, PA. VT 009 779 INDUSTRIAL TESTING; INDUSTRIAL ARTS TEACHING GUIDE.	43
CINCINNATI PUBLIC SCHOOLS, OHIO VT 006 235 BASIC AUTOMOBILE MECHANICS, CENTRAL HIGH SCHOOL, GRADES 9 AND 10. VT 006 236 DRAFTING STANDARDS MANUAL. VT 006 260 DRAFTING I. VT 006 262 ELECTRICITY I.	17 18 19 19	DALLAS INDEPENDENT SCHOOL DISTRICT, TEX. VT 008 993 WOODWORKING; VOCATIONAL-INDUSTRIAL EDUCATION CURRICULUM GUIDE. VT 009 674 POWER MECHANICS. VT 009 706 METALWORKING; VOCATIONAL- INDUSTRIAL EDUCATION CURRICULUM GUIDE. CURRICULUM BULLETIN SERIES.	40 42 43
CIVIL AIR PATROL, WASHINGTON, D.C. CURRICULUM LAB. VT 010 737 DEMONSTRATION AIDS FOR AVIATION EDUCATION.	47	DENVER PUBLIC SCHOOLS, COLO. VT 005 963 PLASTIC PROJECTS. FIRST SEMESTER.	17
CLACK, EDWARD, AND OTHERS VT 000 508 INDUSTRIAL ARTS PROGRAMING FOR THE HIGH SCHOOL. (BULLETIN, NO. 2148).	3	DENVER PUBLIC SCHOOLS, COLO. DEPT. OF GENERAL CURRICULUM SERVICES VT 007 779 BEGINNING LEATHERCRAFT PROJECTS FOR THE INDUSTRIAL ARTS. VT 007 780 INTERMEDIATE LEATHERCRAFT PROJECTS FOR THE INDUSTRIAL ARTS.	29 29
CLEMSON UNIV., S.C. VT 009 867 SAFETY HANDBOOK; A GUIDE FOR INDUSTRIAL ARTS PROGRAMS, AND TRANSPARENCY MASTERS.	43	DENVER PUBLIC SCHOOLS, COLO. DEPT. OF GENERAL CURRICULUM SERVICES. VT 005 964 INTERMEDIATE PLASTIC PROJECTS.	17

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

	PAGE		PAGE
DEPT. OF EDUCATION, EDMONTON (ALBERTA)		VT 007 861 ED 031 560	31
VT 007 864	32	WCCO PROPERTIES AND KINDS; A BASE SYLLABUS ON WOOD TECHNOLOGY.	
INDUSTRIAL ARTS GRAPHIC COMMUNICATIONS 10, 20, 30.		EASTERN MICHIGAN UNIV., YPSILANTI.	
VT 007 934	32	DEPT. OF INDUSTRIAL EDUCATION.	
JUNIOR HIGH SCHOOL CURRICULUM GUIDE FOR INDUSTRIAL ARTS.		VT 006 155 ED 041 099	17
DEVORE, PAUL W.		ELEMENTARY SCHOOL INDUSTRIAL ARTS-- SELECTED READINGS AND RESOURCES.	
VT 005 595 ED 020 429	15	ERWIN, WILLIAM R., JR.	
STRUCTURE AND CONTENT FOUNDATIONS FOR CURRICULUM DEVELOPMENT.		VT 002 778 ED 022 849	10
DIERS, ANDREW V.		INDUSTRIAL ARTS; A GUIDE FOR COLORADO SCHOOLS.	
VT 011 485	49	ESHELBY, DON	
LETTERING, LAP--UNIT I.		VT 011 998 ED 047 088	53
ENGINEERING 20, BASIC DRAFTING.		BIBLIOGRAPHY OF INDUSTRIAL ARTS EDUCATION DOCUMENTS.	
VT 011 486	49	FEIRER, JOHN L.	
INSTRUMENT TECHNIQUE, LAP--UNIT II. ENGINEERING 20, BASIC DRAFTING.		VT 008 269 ED 026 273	36
VT 011 488	49	SPACE RESOURCES FOR THE HIGH SCHOOL. INDUSTRIAL ARTS RESOURCE UNITS.	
MULTI-VIEW DRAWINGS, LAP--UNIT IV. ENGINEERING 20, BASIC DRAFTING.		FLORIDA STATE DEPT. OF EDUCATION, TALLAHASSEE	
VT 011 490	50	VT 007 730	29
ADVANCED MULTI-VIEW DRAWINGS, LAP-- UNIT VI. ENGINEERING 20, BASIC DRAFTING.		INDUSTRIAL ARTS; A STUDY OF INDUSTRIAL TECHNOLOGY. INTERIM BULLETIN.	
VT 011 491	50	VT CCB 219	34
AUXILIARY VIEWS, LAP--UNIT VII. ENGINEERING 20, BASIC DRAFTING.		COUNTY COURSE OF STUDY: INDUSTRIAL ARTS.	
VT 011 492	50	VT 008 407	37
SECTIONAL VIEWS, LAP--UNIT VIII. ENGINEERING 20, BASIC DRAFTING.		ELEMENTARY SCHOOL INDUSTRIAL ARTS.	
VT 011 493	50	FLORIDA STATE DEPT. OF EDUCATION, TALLAHASSEE.	
DIMENSIONING LAP--UNIT IX. ENGINEERING 20, BASIC DRAFTING.		VT 011 775	52
VT 011 494	50	SAFETY IN INDUSTRIAL ARTS LABORATORIES.	
WORKING DRAWINGS, LAP--UNIT X. ENGINEERING 20, BASIC DRAFTING.		FLORIDA STATE DEPT. OF EDUCATION, TALLAHASSEE. TECHNICAL AND HEALTH OCCUPATIONS EDUCATION SECTION	
DUFFY, JOSEPH W.		VT 009 658	42
VT 008 733	39	GUIDELINES FOR ESTABLISHING AND EVALUATING DRAFTING AND DESIGN TECHNOLOGY PROGRAMS.	
POWER: PRIME MOVER OF TECHNOLOGY. LABORATORY MANUAL.		GERHART, RICHARD H.	
VT 008 734	39	VT 009 072 ED 031 594	40
POWER: PRIME MOVER OF TECHNOLOGY. TEACHER'S MANUAL.		DEVELOPING AMERICAN INDUSTRY COURSES FOR THE SECONDARY SCHOOL.	
EASTER, D. DALE, AND OTHERS		GEIL, JOHN J.	
VT 000 506	3	VT 011 775	52
INDUSTRIAL ARTS COURSE OUTLINES, GRADES SEVEN, EIGHT, AND NINE.		SAFETY IN INDUSTRIAL ARTS LABORATORIES.	
EASTERN KENTUCKY UNIV., RICHMOND		GENERAL ELECTRIC CO., CINCINNATI, OHIO. FLIGHT PROPULSION DIV.	
VT 007 857 ED 031 556	30	VT 007 334	26
LAMINATING AND BENDING; A BASE SYLLABUS ON WOOD TECHNOLOGY.		FABRICATION TECHNIQUES FOR TURBINE COMPONENTS.	
VT 007 858 ED 031 557	31		
ADHESIVES; A BASE SYLLABUS ON WOOD TECHNOLOGY.			
VT 007 859 ED 031 558	31		
LUMBER AND RELATED PRODUCTS; A BASE SYLLABUS ON WOOD TECHNOLOGY.			
VT 007 860 ED 031 559	31		
WOOD SUBSTITUTES; A BASE SYLLABUS ON WOOD TECHNOLOGY.			

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

	PAGE		PAGE
GEORGIA SOUTHERN COLL., STATESBORO. VT 011 748 FUNCTIONS OF INDUSTRY.	52	HAWAII STATE DEPT. OF EDUCATION, HONOLULU. INDUSTRIAL ARTS EDUCATION SERVICE VT 001 200 INSTRUCTIONAL GUIDE FOR METALS.	6
GEORGIA STATE DEPT. OF EDUCATION, ATLANTA. INDUSTRIAL ARTS EDUCATION VT 004 851 GENERAL INDUSTRIAL ARTS (MANUFACTURING),	14	HAWAII STATE DEPT. OF EDUCATION, HONOLULU. VOCATIONAL, POST-HIGH AND ADULT EDUCATION BRANCH VT 005 128 REVISED APPROVED BOOK LIST, INDUSTRIAL ARTS, GRADES K-12.	14
GORHAM STATE COLL., MAINE VT 007 844 ED 031 554 UNITS FOR THE LABORATORY OF INDUSTRIES.	29	HAY, EARL VT 005 164 EARLY SECONDARY INDUSTRIAL ARTS.	14
GORHAM STATE TEACHERS COLL., MAINE. INDUSTRIAL ARTS DEPT. VT 008 268 SAFETY EDUCATION IN THE SCHOOL SHOP. VT 009 281 INTERPRETING INDUSTRY THROUGH LINE PRODUCTION.	36 41	HEDGES, CHARLES S. VT 007 384 FLUID POWER IN PLANT AND FIELD. VOLUME 1. VT 007 439 INDUSTRIAL FLUID POWER. VOLUME 1. VT 007 440 INDUSTRIAL FLUID POWER. VOLUME 2. VT 007 441 INDUSTRIAL FLUID POWER. VOLUME 3.	27 27 27
HAMES, DAN VT 011 487 THE ABC'S OF VIEWS OF OBJECTS. MINI LAP--UNIT 3. BASIC DRAFTING SURVEY CLASS. VT 011 489 INTRODUCTION TO APPLIED DRAWING. BASIC DRAFTING SURVEY CLASS, UNIT 5. VT 011 502 DIMENSIONING RULES AND PRINCIPLES. LAP NO. 11.	49 49 51	HILL, EDWIN K., AND OTHERS VT 006 998 BASIC ELECTRICITY; STUDENT WORKBOOK, INSTRUCTORS GUIDE AND TESTS.	24
HAMPTON PUBLIC SCHOOLS, VA. VT 001 479 INDUSTRIAL EDUCATION IN HAMPTON SCHOOL SYSTEM, 1966-1967.	6	HOLT, E.E. VT 000 847 A GUIDE FOR INDUSTRIAL ARTS IN OHIO SCHOOLS, SECOND EDITION.	4
HANSON (HENRY L.) CO., INC., WORCESTER, MASS. VT 007 807 HOW TO USE TAPS, DIES AND HIGH SPEED STEEL DRILLS.	29	HOOTS, WILLIAM R. VT 007 459 ED 024 822 THE DEVELOPMENT OF A COURSE OF STUDY FOR INDUSTRIAL ARTS EDUCATION AT THE ELEMENTARY SCHOOL LEVEL.	28
HARNACK, RICHARD B. VT 007 308 EQUIPMENT, TOOLS AND MATERIALS, AS PROPOSED BY THE TECHNOLOGY FOR CHILDREN PROJECT. VT 007 388 TECHNOLOGY FOR CHILDREN PROJECT. RECOMMENDED PROCEDURES FOR SAFETY AND USE OF HAND TOOLS IN THE ELEMENTARY CLASSROOM.	26 27	HOVERSON, BURTON R. VT 003 977 JUNIOR HIGH SCHOOL METALS, A CURRICULUM GUIDE.	12
HASTINGS, JAMES R., ED. VT 002 002 ED 021 963 CERAMICS, PROJECT IDEAS FOR INDUSTRIAL ARTS.	7	HUGHSON UNION HIGH SCHOOL, CALIF. VT 011 485 LETTERING, LAP--UNIT 1. ENGINEERING 20, BASIC DRAFTING. VT 011 486 INSTRUMENT TECHNIQUE, LAP--UNIT II. ENGINEERING 20, BASIC DRAFTING. VT 011 487 THE ABC'S OF VIEWS OF OBJECTS. MINI LAP--UNIT 3. BASIC DRAFTING SURVEY CLASS. VT 011 489 INTRODUCTION TO APPLIED DRAWING. BASIC DRAFTING SURVEY CLASS, UNIT 5.	49 49 49 49

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

	PAGE		PAGE
VT 011 490	50	INSTRUCTIONAL MATERIALS SERVICE,	
ADVANCED MULTI-VIEW DRAWINGS, LAP--		KENNEDY, MINN.	
UNIT VI. ENGINEERING 20, BASIC		VT 008 796	39
DRAFTING.		ORGANIZATION AND ADMINISTRATION	
VT 011 491	50	FORMS FOR INDUSTRIAL ARTS.	
AUXILIARY VIEWS, LAP--UNIT VII.			
ENGINEERING 20, BASIC DRAFTING.		IOWA STATE DEPT. OF PUBLIC	
VT 011 492	50	INSTRUCTION, DES MOINES.	
SECTIONAL VIEWS, LAP--UNIT VIII.		VT 013 061	55
ENGINEERING 20, BASIC DRAFTING.		INDUSTRIAL ARTS FOR IOWA SCHOOLS.	
VT 011 493	50		
DIMENSIONING LAP--UNIT IX.		JACOBSON, JOHN	
ENGINEERING 20, BASIC DRAFTING.		VT 010 613	46
VT 011 494	50	FUNDAMENTALS OF ELECTRICITY AND	
WORKING DRAWINGS, LAP--UNIT X.		ELECTRONICS.	
ENGINEERING 20, BASIC DRAFTING.			
VT 011 496	51	JAHNKE, L.P.	
COMPONENTS OF THE AUTOMOBILE.		VT 007 334	26
VT 011 497	51	FABRICATION TECHNIQUES FOR TURBINE	
SAFETY IN THE AUTO SHOP.		COMPONENTS.	
VT 011 502	51		
DIMENSIONING RULES AND PRINCIPLES.		JEFFERSON COUNTY PUBLIC SCHOOLS,	
LAP NO. 11.		LOUISVILLE, KY. DEPT. OF CURRICULUM	
VT 011 507	52	DEVELOPMENT AND SUPERVISION	
PICTORIAL DRAWINGS. DRAFTING--		VT 000 898	4
LANGUAGE OF INDUSTRY. LAP NO. 8,		INDUSTRIAL ARTS CURRICULUM GUIDE	
BASIC DRAFTING.		FOR SEVENTH AND EIGHTH GRADES.	
VT 011 550	52		
FIND YOUR WAY. LEARNING ACTIVITY		KANSAS CITY PUBLIC SCHOOLS, MO.	
PACKAGE, "PRE-LAP".		VT 007 464	28
		INDUSTRIAL ARTS ENRICHMENT	
HULEY, MILAN		EXPERIENCES IN THE ELEMENTARY	
VT 010 613	46	SCHOOL. GRADES FIVE AND SIX.	
FUNDAMENTALS OF ELECTRICITY AND			
ELECTRONICS.		KANSAS CITY PUBLIC SCHOOLS, MO.	
		INDUSTRIAL ARTS DEPT.	
IDAHO STATE DEPT. OF EDUCATION,		VT 011 295	47
BOISE. DIV. OF INSTRUCTION		CURRICULUM GUIDE IN METALS, GRADES	
VT 001 958	7	SEVEN THROUGH TWELVE.	
INDUSTRIAL ARTS CURRICULUM		VT 011 334	48
PLANNING GUIDE, GRADES 7-12.		BEGINNING DRAFTING. A HANDBOOK FOR	
VT 003 271	11	GRADES SEVEN AND EIGHT.	
INDUSTRIAL ARTS CURRICULUM			
PLANNING GUIDE, GRADES 7-12.		KENTUCKY STATE DEPT. OF EDUCATION,	
		FRANKFORT	
ILLINOIS STATE DEPT. OF PUBLIC		VT 000 887	4
INSTRUCTION, SPRINGFIELD		THE PROGRAM OF INDUSTRIAL ARTS	
VT 000 333	2	EDUCATION IN KENTUCKY. EDUCATIONAL	
GUIDELINES FOR INDUSTRIAL ARTS		BULLETIN, V. 31, NO. 8.	
INSTRUCTION.			
INDIANA STATE BOARD OF EDUCATION,		KLABENES, ROBERT E., AND OTHERS	
INDIANAPOLIS		VT 002 506	9
VT 003 713	12	NEBRASKA INDUSTRIAL EDUCATION	
STATE ADOPTED TEXTBOOKS FOR		CURRICULUM GUIDE, GRADES 7-12.	
INDUSTRIAL ARTS IN INDIANA.			
INDIANA STATE DEPT. OF PUBLIC		KLEHM, WALTER A., ED., AND OTHERS	
INSTRUCTION, INDIANAPOLIS		VT 000 333	2
VT 002 112	8	GUIDELINES FOR INDUSTRIAL ARTS	
A GUIDE FOR TEACHING POWER		INSTRUCTION.	
MECHANICS IN INDUSTRIAL ARTS IN			
INDIANA.		LARSEN, DELMAR L.	
		VT 006 155 ED 041 099	17
		ELEMENTARY SCHOOL INDUSTRIAL ARTS--	
		SELECTED READINGS AND RESOURCES.	

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

	PAGE		PAGE
LEFLORE COUNTY SCHOOL DISTRICT, GREENWOOD, MISS.		MICHIGAN STATE DEPT. OF EDUCATION, LANSING.	
VT 008 562 EC 033 195	38	VT 012 367	53
INDUSTRIAL ARTS AND VOCATIONAL EDUCATION IN GRADES K-12. FINAL REPORT.		ELECTRICITY--ELECTRONICS; CURRICULUM GUIDE FOR AN INTRODUCTORY COURSE.	
VT 009 704	42	VT 012 368	53
ARTS AND CRAFTS FOR K TO 6.		INDUSTRIAL ARTS PROGRAMING FOR JUNIOR AND SENIOR HIGH SCHOOLS.	
LOS ANGELES CITY SCHOOLS, CALIF. DIV. OF INSTRUCTIONAL PLANNING AND SERVICES		MICHIGAN STATE DEPT. OF PUBLIC INSTRUCTION, LANSING	
VT 006 323	20	VT 000 508	3
INDUSTRIAL ARTS INSTRUCTIONAL GUIDE FOR GRADES K-6. ELEMENTARY SCHOOL PRACTICAL ARTS.		INDUSTRIAL ARTS PROGRAMING FOR THE HIGH SCHOOL. (BULLETIN, NO. 2148).	
VT 006 661	21	VT 000 531	3
AN INSTRUCTIONAL GUIDE FOR INDUSTRIAL WOODWORKING.		POWER.	
LOUGHRAN, BERNICE B.		MIKLUS, SAMUEL	
VT 009 306	41	VT 004 806	14
APPLIED DESIGN.		TEACHER GUIDE FOR AIRBRUSH.	
MAINE STATE DEPT. OF EDUCATION, AUGUSTA		MILWAUKEE PUBLIC SCHOOLS, WIS. DEPT. OF ELEMENTARY AND SECONDARY EDUCATION.	
VT 009 081	40	VT 012 748	54
A SUGGESTED GUIDE FOR TEACHING SLOW LEARNERS IN INDUSTRIAL ARTS IN THE PUBLIC SCHOOLS.		DRAFTING (INSTRUCTIONAL SUPPLEMENT).	
MAINE STATE DEPT. OF EDUCATION, AUGUSTA. BUREAU OF VOCATIONAL EDUCATION		MILWAUKEE PUBLIC SCHOOLS, WIS. DEPT. OF SECONDARY CURRICULUM AND INSTRUCTION.	
VT 000 017 EO 026 449	2	VT 012 752	54
INDUSTRIAL ARTS AND TECHNOLOGY IN MAINE, A STUDY OF AMERICAN INDUSTRY. A GUIDE FOR SECONDARY SCHOOLS IN MAINE.		MECHANICAL DRAWING 1-4. A GUIDE FOR INDUSTRIAL ARTS TEACHERS.	
VT 008 664	38	MILWAUKEE PUBLIC SCHOOLS, WIS. DIV. OF CURRICULUM AND INSTRUCTION.	
A GUIDE TO BETTER TEACHING.		VT 010 605	46
VT 009 281	41	METALWORK 1-2.	46
INTERPRETING INDUSTRY THROUGH LINE PRODUCTION.		VT 010 613	
MCGRAW-HILL BOOK CO., NEW YORK, N.Y. TEXT-FILM DIV.		FUNDAMENTALS OF ELECTRICITY AND ELECTRONICS.	
VT 008 465	38	MILWAUKEE PUBLIC SCHOOLS, WIS. INDUSTRIAL ARTS DEPT.	
TWENTY-EIGHT INDUSTRIAL ARTS FILMS FROM MCGRAW-HILL.		VT 012 741	54
MEEHAN, MICHAEL		WOODWORK 1-2.	
VT 011 086	47	VT 012 754	55
INDUSTRIAL ARTS.		78 WOODWORK.	
		MINNESOTA STATE DEPT. OF EDUCATION, ST. PAUL.	
		VT 012 370	53
		MECHANICAL AND ELECTRICAL TECHNOLOGY. RESOURCE GUIDE FOR EFFECTIVE INSTRUCTION IN INDUSTRIAL ARTS.	
		VT 012 371	54
		MATERIALS TECHNOLOGY. RESOURCE GUIDE FOR EFFECTIVE INSTRUCTION IN INDUSTRIAL ARTS.	

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

	PAGE		PAGE
VT 012 372 VISUAL COMMUNICATION TECHNOLOGY. RESOURCE GUIDE FOR EFFECTIVE INSTRUCTION IN INDUSTRIAL ARTS.	54	NEBRASKA STATE DEPT. OF EDUCATION, LINCOLN VT 002 506 NEBRASKA INDUSTRIAL EDUCATION CURRICULUM GUIDE, GRADES 7-12.	9
MISSISSIPPI STATE DEPT. OF EDUCATION, JACKSON. CURRICULUM LAB. VT 008 537 VOCATIONAL INDUSTRIAL DRAFTING. A TEACHER'S OUTLINE.	38	NELSON, HERBERT L. VT 006 155 ED 041 099 ELEMENTARY SCHOOL INDUSTRIAL ARTS-- SELECTED READINGS AND RESOURCES.	17
MISSOURI STATE DEPT. OF EDUCATION, JEFFERSON CITY VT 008 270 HANDBOOK FOR INDUSTRIAL ARTS EDUCATION.	36	NEW JERSEY STATE DEPT. OF EDUCATION, TRENTON. DIV. OF VOCATIONAL EDUCATION VT 004 806 TEACHER GUIDE FOR AIRBRUSH.	14
MISSOURI UNIV., COLUMBIA. DEPT. OF INDUSTRIAL EDUCATION VT 002 032 APPLIED ELECTRICITY. (INDUSTRIAL ARTS SERIES).	8	VT 007 308 EQUIPMENT, TOOLS AND MATERIALS, AS PROPOSED BY THE TECHNOLOGY FOR CHILDREN PROJECT.	26
MITCHELL, E.F., AND OTHERS VT 008 562 ED 033 195 INDUSTRIAL ARTS AND VOCATIONAL EDUCATION IN GRADES K-12. FINAL REPORT.	38	VT 007 388 TECHNOLOGY FOR CHILDREN PROJECT. RECOMMENDED PROCEDURES FOR SAFETY AND USE OF HAND TOOLS IN THE ELEMENTARY CLASSROOM.	27
MODESTO JUNIOR COLL., CALIF. VT 011 488 MULTI-VIEW DRAWINGS, LAP--UNIT IV. ENGINEERING 20, BASIC DRAFTING.	49	NEW MEXICO INDUSTRIAL ARTS ASSOCIATION VT 006 430 THE NEW MEXICO STATE PLANNING GUIDE FOR INDUSTRIAL ARTS.	20
MYERS, NORMAN L. VT 012 899 INDUSTRIAL ARTS POWER MECHANICS.	55	NEW MEXICO STATE DEPT. OF EDUCATION, SANTA FE VT 006 430 THE NEW MEXICO STATE PLANNING GUIDE FOR INDUSTRIAL ARTS.	20
NAPA COUNTY SUPERINTENDENT OF SCHOOLS, CALIF. VT 001 858 CAREER EDUCATION RESOURCE GUIDE.	7	NEW YORK CITY BOARD OF EDUCATION, BROOKLYN, N.Y. VT 001 258 INDUSTRIAL ARTS WOODWORKING, SECONDARY SCHOOLS.	6
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, WASHINGTON, D.C. VT 008 269 ED 026 273 SPACE RESOURCES FOR THE HIGH SCHOOL. INDUSTRIAL ARTS RESOURCE UNITS.	36	NEW YORK CITY BOARD OF EDUCATION, BROOKLYN, N.Y. BUREAU OF CURRICULUM DEVELOPMENT VT 005 279 THE PRE-TECHNICAL PROJECT.	15
NATIONAL SAFETY COUNCIL, CHICAGO, ILL. VT 009 942 ED 035 733 AN ACCIDENT PREVENTION PROGRAM FOR SCHOOL SHOPS AND LABORATORIES; A SUGGESTED GUIDE FOR SCHOOL ADMINISTRATORS.	44	NEW YORK CITY BOARD OF EDUCATION, BROOKLYN, N.Y. BUREAU OF CURRICULUM DEVELOPMENT. VT 012 759 INDUSTRIAL ARTS AEROSPACE FOR INTERMEDIATE AND JUNIOR HIGH SCHOOLS. EXPERIMENTAL MATERIALS, FIRST DRAFT.	55
NEBRASKA INDUSTRIAL EDUCATION ADVISORY COMMITTEE VT 002 504 ADMINISTRATIVE GUIDELINES FOR INDUSTRIAL EDUCATION, GRADES 7-12.	9	NEW YORK CITY BOARD OF EDUCATION, N.Y. VT 000 239 INDUSTRIAL ARTS SUPPLEMENT.	2
VT 002 506 NEBRASKA INDUSTRIAL EDUCATION CURRICULUM GUIDE, GRADES 7-12.	9		

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

	PAGE		PAGE
VT 001 359	6	VT 006 989	24
INDUSTRIAL ARTS.		ELECTRIC ARC WELDING; INSTRUCTION	
VT 003 553	11	BOOK II.	
DRAFTING EXPERIENCES FOR			
INTERMEDIATE SCHOOL PUPILS.		NORTH DAKOTA UNIV., GRAND FORKS.	
VT 004 343	12	VOCATIONAL EDUCATION RESEARCH	
INDUSTRIAL ARTS METALWORKING.		INFORMATION CENTER.	
NEW YORK STATE EDUCATION DEPT.,		VT 011 998 ED 047 088	53
ALBANY		BIBLIOGRAPHY OF INDUSTRIAL ARTS	
VT 002 009 ED 022 843	8	EDUCATION DOCUMENTS.	
INDUSTRIAL ARTS HUMANITIES MEDIA			
GUIDE: CUE.		OFFICE OF EDUCATION (OHEW),	
VT 008 251	34	WASHINGTON, D.C.	
SUGGESTED RELATED INFORMATION FOR		VT 010 505	46
THE ELECTRICITY AREA. INDUSTRIAL		MODERN METALWORKING TECHNOLOGY.	
ARTS COMPREHENSIVE GENERAL SHOP			
COURSE.		OHIO INDUSTRIAL ARTS ASSOCIATION,	
NEW YORK STATE EDUCATION DEPT.,		COLUMBUS	
ALBANY. BUREAU OF INDUSTRIAL ARTS		VT 000 398	3
EDUCATION		INDUSTRIAL ARTS CURRICULUM GUIDE	
VT 008 256	35	FOR ELECTRICITY IN OHIO SCHOOLS.	
ELECTRICITY PROJECT IDEAS FOR		VT 000 847	4
INDUSTRIAL ARTS.		A GUIDE FOR INDUSTRIAL ARTS IN	
		OHIO SCHOOLS, SECOND EDITION.	
		VT 006 244	18
		INDUSTRIAL ARTS CURRICULUM GUIDE	
		FOR INDUSTRIAL CRAFTS IN OHIO	
		SCHOOLS.	
		VT 006 247	18
		INDUSTRIAL ARTS CURRICULUM GUIDE	
		FOR METALS.	
		VT 006 248	18
		INDUSTRIAL ARTS CURRICULUM GUIDE	
		FOR WOODWORKING.	
		VT 006 249	19
		INDUSTRIAL ARTS CURRICULUM GUIDE	
		FOR POWER MECHANICS.	
		OHIO INDUSTRIAL COMMISSION,	
		COLUMBUS. DIV. OF SAFETY AND HYGIENE	
		VT 000 549	4
		INDUSTRIAL ARTS AND VOCATIONAL	
		EDUCATION, SAFETY MANUAL.	
		OHIO STATE DEPARTMENT OF EDUCATION,	
		COLUMBUS	
		VT 006 247	18
		INDUSTRIAL ARTS CURRICULUM GUIDE	
		FOR METALS.	
		OHIO STATE DEPT. OF EDUCATION,	
		COLUMBUS	
		VT 000 398	3
		INDUSTRIAL ARTS CURRICULUM GUIDE	
		FOR ELECTRICITY IN OHIO SCHOOLS.	
		VT 000 549	4
		INDUSTRIAL ARTS AND VOCATIONAL	
		EDUCATION, SAFETY MANUAL.	
		VT 000 847	4
		A GUIDE FOR INDUSTRIAL ARTS IN	
		OHIO SCHOOLS, SECOND EDITION.	
		VT 006 244	18
		INDUSTRIAL ARTS CURRICULUM GUIDE	
		FOR INDUSTRIAL CRAFTS IN OHIO	
		SCHOOLS.	
VT 001 359	6		
INDUSTRIAL ARTS.			
VT 003 553	11		
DRAFTING EXPERIENCES FOR			
INTERMEDIATE SCHOOL PUPILS.			
VT 004 343	12		
INDUSTRIAL ARTS METALWORKING.			
NEW YORK STATE EDUCATION DEPT.,			
ALBANY			
VT 002 009 ED 022 843	8		
INDUSTRIAL ARTS HUMANITIES MEDIA			
GUIDE: CUE.			
VT 008 251	34		
SUGGESTED RELATED INFORMATION FOR			
THE ELECTRICITY AREA. INDUSTRIAL			
ARTS COMPREHENSIVE GENERAL SHOP			
COURSE.			
NEW YORK STATE EDUCATION DEPT.,			
ALBANY. BUREAU OF INDUSTRIAL ARTS			
EDUCATION			
VT 008 256	35		
ELECTRICITY PROJECT IDEAS FOR			
INDUSTRIAL ARTS.			
NEW YORK STATE EDUCATION DEPT.,			
ALBANY. BUREAU OF SECONDARY			
CURRICULUM DEVELOPMENT			
VT 002 002 ED 021 963	7		
CERAMICS, PROJECT IDEAS FOR			
INDUSTRIAL ARTS.			
VT 005 164	14		
EARLY SECONDARY INDUSTRIAL ARTS.			
NEW YORK STATE EDUCATION DEPT.,			
ALBANY. BUREAU OF SECONDARY			
CURRICULUM DEVELOPMENT.			
VT 002 004	8		
AN EXPERIMENTAL RESOURCE UNIT IN			
PLASTICS FOR INDUSTRIAL ARTS.			
NISH, DALE L.			
VT 006 979	22		
EXPANDABLE POLYSTYRENE PLASTICS.			
INSTRUCTION BOOK NO. 1, PRE-			
EXPANSION OF EXPANDABLE			
POLYSTYRENE BEADS.			
VT 006 980	22		
EXPANDABLE POLYSTYRENE PLASTICS.			
INSTRUCTION BOOK NO. 2,			
PREPARATION AND ASSEMBLY OF MOLD.			
VT 006 981	23		
EXPANDABLE POLYSTYRENE PLASTICS.			
INSTRUCTION BOOK NO. 3, MOLDING			
THE PRE-EXPANDED POLYSTYRENE BEADS.			
VT 006 982	23		
EXPANDABLE POLYSTYRENE PLASTICS.			
INSTRUCTION BOOK NO. 4, REMOVING			
THE FOAMED PIECE.			
VT 006 983	23		
EXPANDABLE POLYSTYRENE PLASTICS;			
STUDENT GUIDE.			
VT 006 984	23		
EXPANDABLE POLYSTYRENE PLASTICS;			
TEACHER'S GUIDE.			

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

	PAGE		PAGE
VT 006 246 INDUSTRIAL ARTS CURRICULUM GUIDE FOR DRAFTING.	18	ROCHESTER CITY SCHOOL DISTRICT, N.Y. DIV. OF INSTRUCTION VT 006 452	20
VT 006 248 INDUSTRIAL ARTS CURRICULUM GUIDE FOR WOODWORKING.	18	INDUSTRIAL ARTS GRADES 7-8. (TENTATIVE).	
VT 006 249 INDUSTRIAL ARTS CURRICULUM GUIDE FOR POWER MECHANICS.	19	ROCHESTER CITY SCHOOL DISTRICT, N.Y. INDUSTRIAL ARTS DEPT. VT 006 650	21
OHIO STATE UNIV., COLUMBUS VT 007 850 ED 028 266	30	GENERAL METAL WORK 1 AND 2. COURSE OF STUDY.	21
GUIDES IN CONSTRUCTION AND MANUFACTURING FOR ELEMENTARY SCHOOL INDUSTRIAL ARTS. K-2; 3-4; 5-6.		VT 006 765 GRAPHIC ARTS 1 AND 2. COURSE OF STUDY.	
OKLAHOMA CURRICULUM IMPROVEMENT COMMISSION VT 008 238	34	ROYE, CHARLES W. VT 009 704	42
A GUIDE TO IMPROVEMENT OF INDUSTRIAL ARTS IN OKLAHOMA SCHOOLS GRADES 7-12.		ARTS AND CRAFTS FOR K TO 6.	
OKLAHOMA STATE DEPT. OF EDUCATION, OKLAHOMA CITY VT 008 238	34	RUTGERS, THE STATE UNIV., NEW BRUNSWICK, N.J. VT 004 806	14
A GUIDE TO IMPROVEMENT OF INDUSTRIAL ARTS IN OKLAHOMA SCHOOLS GRADES 7-12.		TEACHER GUIDE FOR AIRBRUSH.	
ORANGE COUNTY SCHOOL BOARD, ORLANDO, FLA. VT 008 872	39	RUTGERS, THE STATE UNIV., NEW BRUNSWICK, N.J. CURRICULUM LAB. VT 010 276	44
INDUSTRIAL ARTS CURRICULUM GUIDE: INDUSTRIAL ARTS, 1968-1969.		BASIC ELECTRICITY, THEORY AND PRACTICE.	
PADHAM, ELWOOD VT 000 017 ED 026 449	2	SAINT PAUL PUBLIC SCHOOLS, MINN. VT 003 977	12
INDUSTRIAL ARTS AND TECHNOLOGY IN MAINE, A STUDY OF AMERICAN INDUSTRY. A GUIDE FOR SECONDARY SCHOOLS IN MAINE.		JUNIOR HIGH SCHOOL METALS, A CURRICULUM GUIDE.	
PENNSYLVANIA STATE DEPT. OF PUBLIC INSTRUCTION, HARRISBURG. BUREAU OF GENERAL AND ACADEMIC EDUCATION VT 009 779	43	VT 003 978	12
INDUSTRIAL TESTING; INDUSTRIAL ARTS TEACHING GUIDE.		WOOD AND PLASTIC, A GUIDE FOR GRADES 10-11-12.	
PETERSON, L.C. VT 011 498	51	SAINT PAUL PUBLIC SCHOOLS, MINN. CURRICULUM OFFICE VT 000 467	3
GEOMETRY OF DRAWING, DRAFTING.		GRAPHIC ARTS.	
ROCHESTER CITY SCHOOL DISTRICT, N.Y. VT 006 462	20	SAITO, THOMAS, AND OTHERS VT 005 128	14
INDUSTRIAL ARTS TEACHERS' HANDBOOK.		REVISED APPROVED BOOK LIST, INDUSTRIAL ARTS, GRADES K-12.	
VT 006 597	20	SALMON, DANIEL A. VT 001 258	6
INDUSTRIAL ARTS, DRAFTING 1. TEACHER'S GUIDE.		INDUSTRIAL ARTS WOODWORKING, SECONDARY SCHOOLS.	
VT 006 598	21	SALMON, DANIEL A., ED. VT 003 553	11
DRAFTING I. STUDENT PROBLEMS.		DRAFTING EXPERIENCES FOR INTERMEDIATE SCHOOL PUPILS.	
		SAN DIEGO STATE COLL., CALIF. INDUSTRIAL ARTS DEPT. VT 007 853 ED 031 555	30
		WOODWORKING TECHNOLOGY.	
		SAN JOSE STATE COLL., CALIF. VT 008 259 ED 039 315	35
		INSTRUCTIONAL UNITS FOR INDUSTRIAL MATERIALS, VOL. II.	

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

	PAGE		PAGE
SANTANA VOCATIONAL TECHNICAL CENTER, CALIF. VT 005 593	15	SOUTHEAST MISSOURI STATE COLL., CAPE GIRARDEAU. DEPT. OF INDUSTRIAL ARTS VT 000 969	5
INTRODUCTION TO THE TECHNICAL CORES I AND II.		PRINCIPLES AND PRACTICES OF TRADE AND INDUSTRIAL TEACHING	
SEGAL, ALBERT J. VT 011 550	52	SPINTI, ROBERT J., COMP. VT 002 032	8
FIND YOUR WAY. LEARNING ACTIVITY PACKAGE, "PRE-LAP".		APPLIED ELECTRICITY. (INDUSTRIAL ARTS SERIES).	
SERGEANT, HAROLD A. VT 006 989	24	STATE UNIV. OF NEW YORK, ALBANY. BUREAU OF INDUSTRIAL ARTS EDUCATION VT 008 328	36
ELECTRIC ARC WELDING; INSTRUCTION BOOK II.		SUGGESTED RELATED INFORMATION FOR THE METAL AREA. INDUSTRIAL ARTS COMPREHENSIVE GENERAL SHOP COURSE.	
VT 006 992	24		
ELECTRIC ARC WELDING; INSTRUCTOR'S GUIDE.		STATE UNIV. OF NEW YORK, ALBANY. BUREAU OF SECONDARY CURRICULUM DEVELOPMENT VT 008 253	35
VT 007 001	25	INDUSTRIAL ARTS SYLLABUS IN TRANSPORTATION.	
OXY-ACETYLENE WELDING SERIES; INSTRUCTION BOOK 2.			
VT 007 002	25		
OXY-ACETYLENE WELDING SERIES; INSTRUCTION BOOK 1.			
VT 007 360	26		
ELECTRIC ARC WELDING. INSTRUCTION BOOK.		STEEB, RALPH VT 008 407	37
		ELEMENTARY SCHOOL INDUSTRIAL ARTS.	
SHILOH JUNIOR HIGH, PARMA, OHIO VT 008 004	32	STEEB, RALPH V. VT 011 775	52
A STUDY OF MANUFACTURING INDUSTRIES. AN EXPERIMENTAL COURSE AT THE JUNIOR HIGH SCHOOL LEVEL COMBINING STUDENTS OF GRADES SEVEN, EIGHT, AND NINE.		SAFETY IN INDUSTRIAL ARTS LABORATORIES.	
SHREVE, R.M. VT 011 495	50	STOUT STATE UNIV., MENOMONIE, WIS. VT 002 860	10
SAFETY, YOUR CONCERN AND MINE. LEARNING ACTIVITY PACKAGE, SAFETY IN THE WOOD SHOP.		AMERICAN INDUSTRY TECHNICAL REPORT, 1965-66.	
VT 011 549	52	VT 009 072 ED 031 594	40
IDENTIFICATION, CARE, AND USES OF HAND TOOLS.		DEVELOPING AMERICAN INDUSTRY COURSES FOR THE SECONDARY SCHOOL.	
SKUSE, HARLAND G. VT 010 276	44	STRASSER, ED VT 009 316	42
BASIC ELECTRICITY, THEORY AND PRACTICE.		USING THE ELECTRONIC WOOD WELDER.	
SMITH, REX M. VT 007 263	25	STUNARD, E. ARTHUR VT 007 308	26
INDUSTRIAL ARTS IN THE JUNIOR HIGH SCHOOL.		EQUIPMENT, TOOLS AND MATERIALS, AS PROPOSED BY THE TECHNOLOGY FOR CHILDREN PROJECT.	
SOUTH DAKOTA STATE BOARD OF EDUCATION, PIERRE VT 008 255	35	SUMMERVILLE UNION HIGH SCHOOL, CALIF. WOOD SHOP DEPT. VT 011 549	52
INDUSTRIAL ARTS EDUCATION.		IDENTIFICATION, CARE, AND USES OF HAND TOOLS.	
SOUTH-WESTERN CITY SCHOOL DISTRICT, GROVE CITY, OHIO. VT 011 087	47	TAYLOR, ARLIN VT 001 858	7
INDUSTRIAL ARTS CURRICULUM GUIDE.		CAREER EDUCATION RESOURCE GUIDE.	

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

	PAGE		PAGE
TEXAS A AND M UNIV., COLLEGE STATION. DEPT. OF INDUSTRIAL EDUCATION		TULSA PUBLIC SCHOOLS, OKLA. DEPT. OF INDUSTRIAL ARTS AND VOCATIONAL-TECHNICAL EDUCATION	
VT 002 559 ED 032 381	10	VT 009 899	43
SCIENTIFIC AND ENGINEERING INFLUENCES ON INDUSTRIAL ARTS. A SUMMARY OF INSTITUTE ACTIVITIES (NOEA SUMMER INST., COLLEGE STATION, TEX.).		A TENTATIVE GUIDE FOR IMPLEMENTING INDUSTRIAL ARTS EDUCATION. CURRICULUM GUIDE 1.	
TEXAS EDUCATION AGENCY, AUSTIN		TULSA PUBLIC SCHOOLS, OKLA. DIV. OF INSTRUCTION	
VT 000 978	5	VT 004 596	13
INDUSTRIAL ARTS ELECTRICITY--ELECTRONICS, GRADES 7-12.		HANDBOOK FOR INSTRUCTORS OF INDUSTRIAL ARTS AND VOCATIONAL EDUCATION.	
VT 000 979	5	VT 005 914	16
WOODWORKING, GRADES 7-12; A TENTATIVE BULLETIN.		INSTRUCTOR'S GUIDE FOR PRINTING 1 AND 2.	
VT 000 980	5	VT 005 915	16
DRAFTING, GRADES 7-12.		INSTRUCTOR'S GUIDE FOR SENIOR HIGH SCHOOL WOODWORK IN THE TULSA PUBLIC SCHOOLS (TENTATIVE).	
VT 001 686	7		
INDUSTRIAL ARTS ELECTRICITY--ELECTRONICS, GRADES 7-12. COURSE GUIDE.		UTAH STATE BOARD FOR VOCATIONAL EDUCATION, SALT LAKE CITY	
TEXAS EDUCATION AGENCY, AUSTIN. INDUSTRIAL EDUCATION DIV.		VT 007 689	28
VT 000 306	2	INDUSTRIAL ARTS; ELECTRICITY--ELECTRONICS.	
INFORMATION ON HAND TOOLS FOR METALWORKING TRADES.		VT 008 052	33
TEXAS INDUSTRIAL ARTS ASSOCIATION, DENTON		INDUSTRIAL ARTS.	
VT 000 978	5	VT 008 071	33
INDUSTRIAL ARTS ELECTRICITY--ELECTRONICS, GRADES 7-12.		INDUSTRIAL ARTS; SAFETY GUIDE.	
VT 000 979	5	VT 008 072	33
WOODWORKING, GRADES 7-12; A TENTATIVE BULLETIN.		INDUSTRIAL ARTS; GRAPHIC ARTS.	
VT 000 980	5	VT 008 156	34
DRAFTING, GRADES 7-12.		INDUSTRIAL ARTS; POWER MECHANICS AND SMALL ENGINES.	
VT 001 686	7	VT 008 381	36
INDUSTRIAL ARTS ELECTRICITY--ELECTRONICS, GRADES 7-12. COURSE GUIDE.		INDUSTRIAL ARTS. DRAFTING GUIDE.	
TEXAS UNIV., AUSTIN. DEPT. OF INDUSTRIAL EDUCATION		VT 008 382	37
VT 000 306	2	INDUSTRIAL ARTS. METALS.	
INFORMATION ON HAND TOOLS FOR METALWORKING TRADES.		VT 008 383	37
THE OHIO INDUSTRIAL ARTS ASSOCIATION, COLUMBUS		INDUSTRIAL ARTS. AUTOMOTIVE MECHANICS GUIDE.	
VT 006 246	18	VT 008 384	37
INDUSTRIAL ARTS CURRICULUM GUIDE FOR DRAFTING.		INDUSTRIAL ARTS. WOODS.	
THOMAS A. EDISON VOCATIONAL AND TECHNICAL HIGH SCHOOL, ELIZABETH, N.J.		VT 008 385	37
VT 010 276	44	INDUSTRIAL ARTS. PLASTICS.	
BASIC ELECTRICITY, THEORY AND PRACTICE.		VAUGHN, CHARLES, AND OTHERS	
		VT 011 496	51
		COMPONENTS OF THE AUTOMOBILE.	
		VERMONT INDUSTRIAL ARTS TEACHERS' ASSOCIATION	
		VT 008 041	33
		INDUSTRIAL ARTS EDUCATION CURRICULUM GUIDE.	
		VERMONT STATE DEPT. OF EDUCATION, MONTPELIER. DIV. OF INSTRUCTIONAL SERVICES	
		VT 008 041	33
		INDUSTRIAL ARTS EDUCATION CURRICULUM GUIDE.	

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

	PAGE		PAGE
VIRGINIA STATE DEPT. OF EDUCATION, RICHMOND. INDUSTRIAL EDUCATION SERVICE		VT 006 998	24
VT 005 650	16	BASIC ELECTRICITY; STUDENT WORKBOOK, INSTRUCTORS GUIDE AND TESTS.	
STATE CURRICULUM GUIDE FOR INDUSTRIAL ARTS AND VOCATIONAL ELECTRICITY-ELECTRONICS.		VT 007 001	25
WARFIELD, C.H.		OXY-ACETYLENE WELDING SERIES; INSTRUCTION BOOK 2.	25
VT 007 363	26	VT 007 002	25
TEACHING AIDS IN ELECTRICITY.		OXY-ACETYLENE WELDING SERIES; INSTRUCTION BOOK 1.	
WASHINGTON STATE DEPT. OF PUBLIC INSTRUCTION, OLYMPIA. OFFICE OF THE STATE SUPERINTENDENT.		VT 007 011	25
VT 011 074	47	ELECTRIC ARC WELDING; STUDENT PERFORMANCE PRE-TEST.	
INDUSTRIAL ARTS SAFETY CHECKLIST.		VT 007 360	26
WASHINGTON STATE UNIV., PULLMAN. DEPT. OF EDUCATION		ELECTRIC ARC WELDING. INSTRUCTION BOOK.	
VT 006 976	22	WAYNE STATE UNIV., DETROIT, MICH.	
PERFORMANCE PRE-TEST FOR STUDENTS USING THE EXPANDABLE POLYSTYRENE PLASTICS UNIT.		VT 011 399 ED 040 303	48
VT 006 977	22	INDIVIDUALIZED MATERIAL FOR INDUSTRIAL EDUCATION BASED ON THE AVA BOOKLET "A GUIDE TO IMPROVING INSTRUCTION IN INDUSTRIAL ARTS".	
KNOWLEDGE PRE-TEST; CONSTRUCTING EXPANDABLE POLYSTYRENE PLASTIC ICE BUCKET.		WAYNE STATE UNIV., DETROIT, MICH. DEPT. OF INDUSTRIAL EDUCATION.	
VT 006 978	22	VT 008 184 ED 033 193	34
PERFORMANCE CHECKLIST NO. 1; THE PRE-EXPANSION OF EXPANDABLE POLYSTYRENE BEADS.		COURSE OUTLINE AND RESOURCE MATERIALS FOR FLUID POWER INSTRUCTION IN SECONDARY SCHOOLS, PREPARED AT THE NDEA SUMMER INSTITUTE 1968.	
VT 006 979	22	WEST VIRGINIA STATE DEPT. OF EDUCATION, CHARLESTON	
EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 1, PRE- EXPANSION OF EXPANDABLE POLYSTYRENE BEADS.		VT 007 263	25
VT 006 980	22	INDUSTRIAL ARTS IN THE JUNIOR HIGH SCHOOL.	
EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 2, PREPARATION AND ASSEMBLY OF MOLD.		WILLIAMS, EDGAR, AND OTHERS	
VT 006 981	23	VT 011 497	51
EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 3, MOLDING THE PRE-EXPANDED POLYSTYRENE BEADS.		SAFETY IN THE AUTO SHOP.	
VT 006 982	23	WILLIAMS, KENNETH E.	
EXPANDABLE POLYSTYRENE PLASTICS. INSTRUCTION BOOK NO. 4, REMOVING THE FOAMED PIECE.		VT 001 479	6
VT 006 983	23	INDUSTRIAL EDUCATION IN HAMPTON SCHOOL SYSTEM, 1966-1967.	
EXPANDABLE POLYSTYRENE PLASTICS; STUDENT GUIDE.		WILLIAMS, WILLIAM A.	
VT 006 984	23	VT 009 942 ED 035 733	44
EXPANDABLE POLYSTYRENE PLASTICS; TEACHER'S GUIDE.		AN ACCIDENT PREVENTION PROGRAM FOR SCHOOL SHOPS AND LABORATORIES; A SUGGESTED GUIDE FOR SCHOOL ADMINISTRATORS.	
VT 006 985	24	WINSTON-SALEM/FORSYTH COUNTY SCHOOLS, N.C.	
ELECTRIC ARC WELDING; KNOWLEDGE PRE-TEST.		VT 009 194	41
VT 006 989	24	SENIOR HIGH SCHOOL INDUSTRIAL ARTS.	
ELECTRIC ARC WELDING; INSTRUCTION BOOK II.		WISCONSIN STATE UNIV., PLATTEVILLE. COLL. OF INDUSTRY	
VT 006 992	24	VT 010 290 ED 037 554	44
ELECTRIC ARC WELDING; INSTRUCTOR'S GUIDE.		DEVELOPMENT AND STRUCTURE OF INDUSTRY: INFORMATION AND JOB SHEETS.	

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

	PAGE
VT 010 313 ED 037 555 DEVELOPMENT AND STRUCTURE OF INDUSTRY: TEACHING PLAN AND ACTIVITY PLAN SHEETS.	45
VT 010 314 ED 037 556 DEVELOPMENT AND STRUCTURE OF INDUSTRY: STUDY GUIDE.	45
VT 010 315 ED 037 557 DEVELOPMENT AND STRUCTURE OF INDUSTRY: INSTRUCTIONAL AIDS LIST AND BIBLIOGRAPHY.	45
WOLANSKY, WILLIAM D. VT 008 184 ED 033 193 COURSE OUTLINE AND RESOURCE MATERIALS FOR FLUID POWER INSTRUCTION IN SECONDARY SCHOOLS, PREPARED AT THE NDEA SUMMER INSTITUTE 1968.	34
WOMACK MACHINE SUPPLY CO., DALLAS, TEX. VT 007 384 FLUID POWER IN PLANT AND FIELD. VOLUME 1.	27
VT 007 439 INDUSTRIAL FLUID POWER. VOLUME 1.	27
VT 007 440 INDUSTRIAL FLUID POWER. VOLUME 2.	27
VT 007 441 INDUSTRIAL FLUID POWER. VOLUME 3.	27
WOMACK, R.C. VT 007 384 FLUID POWER IN PLANT AND FIELD. VOLUME 1.	27
WOODWARD, ROBERT L. VT 002 345 INDUSTRIAL ARTS SAFETY INSTRUCTION.	9
VT 012 899 INDUSTRIAL ARTS POWER MECHANICS.	55
WYDOWN JUNIOR HIGH, CLAYTON, MO. VT 011 086 INDUSTRIAL ARTS.	47
WYOMING RESEARCH COORDINATING UNIT IN VOCATIONAL-TECHNICAL EDUCATION, CHEYENNE. VT 011 363 INDUSTRIAL ARTS CURRICULUM GUIDE FOR THE STATE OF WYOMING GRADES K-12.	48
ZIEL, H.R. VT 003 035 INDUSTRIAL ARTS IN GENERAL EDUCATION. RESEARCH REPORT I, 1966.	11

CONVERSION OF DOCUMENT NUMBER INDEX

VT 000 017	ED 026 449	VT 005 593	*ED 028 305	VT 007 779	*EO 034 074
VT 000 239	*ED 045 856	VT 005 595	EO 020 429	VT 007 780	*EO 034 074
VT 000 398	*ED 041 177	VT 005 650	*EO 028 305	VT 007 807	*ED 030 770
VT 000 467	*ED 041 177	VT 005 914	*ED 037 585	VT 007 844	ED 031 554
VT 000 506	*ED 041 177	VT 005 915	*ED 037 585	VT 007 850	EO 028 266
VT 000 508	*ED 015 349	VT 006 155	EO 041 099	VT 007 853	EO 031 555
VT 000 531	*ED 028 305	VT 006 235	*EO 030 770	VT 007 857	EO 031 556
VT 000 549	*ED 020 442	VT 006 236	*EO 028 305	VT 007 858	EO 031 557
VT 000 847	*ED 028 305	VT 006 244	*ED 034 074	VT 007 859	EO 031 558
VT 000 887	*ED 030 770	VT 006 246	*EO 030 770	VT 007 860	EO 031 559
VT 000 898	*ED 034 074	VT 006 247	*ED 034 074	VT 007 861	EO 031 560
VT 000 969	*ED 022 971	VT 006 248	*EO 032 434	VT 007 864	*EO 042 931
VT 000 978	*ED 030 770	VT 006 249	*EO 032 434	VT 007 934	*EO 034 074
VT 000 979	*ED 041 177	VT 006 260	*EO 032 434	VT 008 004	*EO 034 074
VT 000 980	*ED 041 177	VT 006 262	*EO 030 770	VT 008 041	*ED 034 074
VT 001 200	*ED 041 177	VT 006 323	*ED 030 770	VT 008 052	*EO 034 074
VT 001 258	*ED 041 177	VT 006 430	*EO 037 585	VT 008 071	*ED 034 074
VT 001 359	*ED 045 856	VT 006 452	*ED 034 074	VT 008 072	*ED 034 074
VT 001 479	*ED 028 305	VT 006 462	*ED 037 585	VT 008 156	*ED 034 074
VT 001 686	*ED 037 585	VT 006 597	*ED 041 177	VT 008 184	EO 033 193
VT 001 858	*ED 020 442	VT 006 598	*EO 037 585	VT 008 219	*ED 034 074
VT 001 958	*ED 042 931	VT 006 650	*EO 037 585	VT 008 238	*ED 032 434
VT 002 002	EO 021 963	VT 006 661	*EO 034 074	VT 008 251	*EO 034 074
VT 002 009	EO 022 843	VT 006 765	*ED 037 585	VT 008 253	*EO 034 074
VT 002 032	*ED 013 339	VT 006 976	*ED 032 434	VT 008 255	*EO 034 074
VT 002 112	*ED 045 856	VT 006 977	*EO 032 434	VT 008 256	*ED 034 074
VT 002 345	*ED 045 856	VT 006 978	*EO 032 434	VT 008 259	EO 039 315
VT 002 504	*ED 034 074	VT 006 979	*EO 032 434	VT 008 268	*EO 037 585
VT 002 506	*ED 028 305	VT 006 980	*ED 032 434	VT 008 269	*EO 037 585
VT 002 559	EO 032 381	VT 006 981	*EO 032 434	VT 008 270	*ED 037 585
VT 002 650	*ED 045 856	VT 006 982	*EO 032 434	VT 008 328	*EO 037 585
VT 002 778	EO 022 849	VT 006 983	*EO 032 434	VT 008 381	*EO 032 434
VT 002 860	*ED 030 770	VT 006 984	*EO 032 434	VT 008 382	*EO 032 434
VT 003 035	*ED 028 305	VT 006 985	*ED 041 177	VT 008 383	*EO 032 434
VT 003 271	*ED 028 305	VT 006 989	*EO 041 177	VT 008 384	*ED 032 434
VT 003 286	*ED 022 971	VT 006 992	*EO 041 177	VT 008 385	*EO 032 434
VT 003 553	*ED 045 856	VT 006 998	*EO 041 177	VT 008 407	*EO 032 434
VT 003 713	*ED 020 442	VT 007 001	*ED 030 770	VT 008 465	*EO 032 434
VT 003 977	*ED 020 442	VT 007 002	*EO 030 770	VT 008 537	*EO 037 585
VT 003 978	*ED 020 442	VT 007 011	*EO 041 177	VT 008 562	EO 033 195
VT 004 343	*ED 049 382	VT 007 263	*EO 030 770	VT 008 664	*EO 041 177
VT 004 592	EO 020 349	VT 007 334	*EO 034 074	VT 008 796	*EO 042 931
VT 004 596	*ED 022 971	VT 007 360	*EO 041 177	VT 008 872	*EO 037 585
VT 004 636	*ED 022 971	VT 007 363	*EO 045 856	VT 008 993	*ED 037 585
VT 004 684	*ED 034 074	VT 007 388	*EO 030 770	VT 009 072	EO 031 594
VT 004 806	*ED 020 442	VT 007 459	EO 024 822	VT 009 081	*EO 037 585
VT 004 851	*ED 022 971	VT 007 464	*EO 034 074	VT 009 194	*EO 037 585
VT 005 128	*ED 028 305	VT 007 685	EO 028 259	VT 009 281	*EO 037 585
VT 005 164	*ED 022 971	VT 007 689	*EO 034 074	VT 009 288	*ED 045 856
VT 005 279	*ED 022 971	VT 007 730	*EO 041 177	VT 009 316	*EO 041 177

This index is cumulative from Fall 1967 through Fall 1971. ED numbers designated with asterisks refer to AIM Microfiche Collections.

CONVERSION OF DOCUMENT NUMBER INDEX

VT 009 658	*ED 042 931
VT 009 674	*ED 041 177
VT 009 704	*ED 042 931
VT 009 706	*ED 042 931
VT 009 779	*ED 042 931

VT 009 867	*ED 045 856
VT 009 899	*ED 042 931
VT 009 942	ED 035 733
VT 010 276	*ED 042 931
VT 010 290	ED 037 554

VT 010 301	*ED 049 382
VT 010 313	ED 037 555
VT 010 314	ED 037 556
VT 010 315	ED 037 557
VT 010 439	*ED 045 856

VT 010 505	*ED 045 856
VT 010 605	*ED 049 382
VT 010 613	*ED 049 382
VT 010 644	*ED 049 382
VT 010 737	*ED 049 382

VT 011 399	ED 040 303
VT 011 507	*ED 053 339
VT 011 549	*ED 053 339
VT 011 550	*ED 053 339
VT 011 748	ED 045 807

VT 011 998	ED 047 088
VT 012 367	*ED 053 339
VT 012 368	*ED 053 339
VT 012 741	*ED 053 339
VT 012 752	*ED 053 339

VT 012 754	*ED 053 339
------------	-------------

☆U.S. GOVERNMENT PRINTING OFFICE: 1972—755-336